

FORM IN REPETITION: A VIEW OF NON-HIERARCHICAL
COMPOSITION IN ART

A Thesis

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DEDICATION

this thesis is dedicated to
the memory of my father,
Birger Olaf Pearson

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I would like to express my gratitude to Professor Otto D. Rogers, whose discerning insight always kept one aware and self-critical. Also, I thank the many faculty members and staff in the Art Department who shared with me their knowledge, time and friendship.

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PREFACE

I have approached the writing of this thesis in two ways: first by focusing on a specific use of repetition in art; secondly, by examining this aspect of repetition through an integration of disparate sources of research material. Explanations in support of the view of non-hierarchical composition are drawn from many fields including physics, aesthetics, art theory, mathematics and phenomenology.

My purpose in writing the thesis is not to polemicize but to synthesize insights I have on the use of repetition. I argue for no particular school, nor do I view the subject from an assumed or received system of critical analysis. It is the idea, the activity and the image of artworks free of hierarchical structure that interests me.

In addition to the main text of the thesis, I have included a supplementary essay dealing exclusively with my own artwork. In it I attempt to explain how and why repetition has occurred in my work.

INTRODUCTION

"I can surely always distinguish 3 and 4 in the sign 1 + 1 + 1 + 1 + 1 + 1 + 1."

Ludwig Wittgenstein
Philosophical Remarks

"Similarity is a prerequisite for the noticing of differences."

Rudolf Arnheim
Art and Visual Perception

One of the most effective avenues in which to approach writing about art is that of cross-reference. Music, literature, science, theater, visual art, all encroach upon one another with empirical and metaphoric ease. Cross-reference allows one the freedom of objective analysis. Freedom however, is rarely if ever all-encompassing; in describing art the ability to seek reference in relational areas of the arts, or other disciplines is acknowledged, but when specialization occurs, so does the problem of terminology. Musical criticism has one terminology, science writing another, pictorial analysis yet a third. Comparative aesthetics has yet to form a vocabulary of descriptive terms which can be applied in every art. Hence it is necessary to define and use certain terms that will inform the writing in the most comprehensible manner possible.

"Repetition" is defined as follows in *The Random House College Dictionary*, (Random House, Inc., 1975). "1. the act of repeating; a repeated action, performance, etc. 2. repeated utterance; reiteration." Within a general definition it is, for this writing, necessary to arrive at more specific understanding of types of repetition. For this I will refer to Thomas Munroe's informative book, *Form and Style in the Arts*.¹

All the details or units in a particular work of art or part of one, which repeat a certain component

¹Thomas Munroe, Form and Style in the Arts: An Introduction to Aesthetic Morphology. (Cleveland and London: The Press of Case Western Reserve University in collaboration with the Cleveland Museum of Art, 1970), pp. 390-391.

theme exactly or with variation, constitute a *component thematic series*. A series may be an arrangement of things or events in space, time, or both. A *repetitive series* is one in which all the units are (or seem to be) approximately similar in respect to the theme under consideration; a *varied series* involves variations in that respect.

For the purposes of the thesis we can consider theme and composition as being fairly synonymous in meaning. Repetition then, should be understood as basically consisting of two or more units of equal importance existing within an unaccentuated group. A work of art that employs repetition as a compositional form is opposite to one which uses elements of contrast. Briefly, contrast is arrived at through the juxtaposition (in space, time, or both) of two or more different elements in the same component theme, or composition. The *Random House College Dictionary*, (Random House, Inc., 1975) defines "form", with a Fine Arts label, as "the organization, placement, or relationship of basic elements so as to produce a coherent image; the formal structure of a work of art". We shall not restrict the elements of form to "basic", or "formal" ones, as opposed to "informal" or casual ones. Form, in the broad sense of a *mode of arrangement* includes the physical and chemical structure of objects and events, as well as their outward aspects and appearances, as perceived or imagined.² Form appears in works of art as configuration, pattern, structure, which in turn includes development and transformation.³ Form appears in activity; modes of behaviour and experience, processes involved in creating, performing or producing. Form can be transitory or enduring.⁴

²Thomas Munroe, Form and Style in the Arts: An Introduction to Aesthetic Morphology. p. 3.

³Lancelot Law-Whyte, ed., Aspects of Form. (London: Indiana University Press, 1966), Introduction by Lancelot Law-Whyte, p. 2.

⁴Thomas Munroe, Form and Style in the Arts: An Introduction to Aesthetic Morphology. p. 3.

Last but not least in the list of introductory definitions is "non-hierarchical". This is best approached through a definition of hierarchy. Hierarchy is understood to be a system of things ranked one above the other; a gradient system that in visual arts encompasses variants in size, value, texture, stress, or variants in interest. Rudolf Arnheim in speaking of the "hierarchical gradient" in composition states that in works consisting of only one or two units on a plain ground the hierarchical gradient is very steep.⁵ He goes on to state that an assembly of many units leads in steps from the strongest to the weakest. The hierarchical gradient approaches zero when a pattern is composed of many units of equal weight. The emphasis here is on internal structure, a structure that exists within established boundaries. This internal system, by extension, can become a geometry of assembly; best illustrated by common examples such as a brick wall, a pomegranate, or a maize cob.⁶ These assemblies also demonstrate the hierarchical principle--units being grouped to form larger units, which in turn can easily fit together into larger wholes, (the seed, the fruit, the basket of fruit). Differences in types of hierarchy occur: an internal relationship of forms that are all identical do not constitute a hierarchy. When these identical units group in a closed system to form a larger unit or whole, the internal arrangement remains the same--the only hierarchy that is possible in such a circumstance is the hierarchy of part to whole. But, a part to whole hierarchy is one of size, not of structure; my concern is with structure, in how the artwork is composed. Admittedly the gradient of size from part to whole is hierarchical; for present discussion though, such a distinction is deemed arbitrary to an understanding of non-hierarchical composition.

⁵Rudolf Arnheim, Art and Visual Perception, A Psychology of the Creative Eye. (Berkeley and Los Angeles: University of California Press, 1975), p. 29.

⁶E.H. Gombrich, The Sense of Order, A Study in the Psychology of Decorative Art. (New York: Cornell University Press, 1979), p. 7.

The most pressing concern in any theoretical account (particularly art), once terminology is established, is the degree of familiarity a reader has of the specific artists in which the discussion is founded. Ideally an essay on art should be illustrated. If it is not, the writer must endeavor to "create" a satisfactory image of examples of artwork cited, and/or assume the reader will bring the appropriate visual knowledge to the essay. I believe this problem has been largely eliminated due to the inclusion of only two artworks to compliment the text. It was my feeling that by stringently limiting the number of art objects for discussion, I would be able to examine them in far greater depth than would be possible under more excessive visual circumstances, thus providing a comprehensive interpretation of how, in certain ways, repetition has been employed, and the consequences thereof. I have included one artwork each from the two artists represented.

The artists are Richard Serra and Carl Andre. They are both Americans, and were based in New York City during the period 1966-1976, from which the thesis has extracted works for discussion. The thesis will explore the use of repetition as form in the works of both artists (sculptors) on an individual basis. However, it should be understood that the problems both artists addressed were in many cases similar ones: an example being a materials/process interaction that is manifest in the end image. This is not to imply that a concern for materials and system is unique to Serra and Andre, indeed that approach to artmaking was common to many of their contemporaries, and prevails to this day. Also historical precedents come quickly to mind, Auguste Rodin and Jackson Pollock in particular. However, due to page limitations, I must keep the framework of time, place, and purpose as it relates to the artists under discussion brief.⁷ It should be understood though, in the work of Serra and

⁷Robert Morris has written an excellent article on the materials/process approach to art...see: Robert Morris, "SOME NOTES on the Phenomenology of Making: The Search for the Motivated". Artforum 8, no. 8 (April 1970): 62-66.

Andre, the systematic method of production is in one way or another implied in the finished product. The system that is revealed is revealed as information rather than aesthetics.⁸ Barbara Rose attempted to come to terms with the information inherent in their work, and that of others by way of a pragmatic criticism.⁹ Pragmatic criticism, by definition, involves the treatment of historical phenomenon with reference to their causes, antecedent conditions, results, as opposed to a judgemental system based upon the internal logic of a work.

Internal logic is most easily apprehended in minimalist art, the parent style of post-minimalism (1966-1976), which will constitute the artistic base of this thesis. Minimalist forms reflected a geometric abstract style based on a "pre-executive inner necessity".¹⁰ Essentially this phrase means that the forms have a rigorous external geometry which is congruent with the logic of the style, a logic concluded even before the paintings or sculptures were made. The minimalist style was largely characterized by highly recognizable form with a very strong conceptual element, with "good" gestalt.

⁸Robert Morris, "SOME NOTES on the Phenomenology of Making: The Search for the Motivated". Artforum 8, no. 8 (April 1970): 65.

John Cage was one of the first to explore systems. He systematized the arbitrary itself by devising structures according to deliberate chance methods for ordering relationships.

⁹Barbara Rose, "Problems of Criticism, VI, The Politics of Art. Part III," Artforum 7, no. 9 (May 1969): 46.

Barbara Rose writes, "Perception, however, must precede evaluation, as opposed to being pursuant to it, because to be a true measure it must proceed, not from an idealist base of fixed absolutes and mechanical theories, but from pragmatic consideration of intention, effect and concrete consequence in practice and experience...In place of metaphysical absolutes, compartmentalized essences and abstractions, the new art, like pragmatism, focuses on use, function and behaviour both perceptual and experiential."

This essay, perceptive as it is, seeks to unite in one sweeping gesture such diverse artists as Carl Andre, Les Levine, Sol LeWitt, and among others, an anonymous artist who apparently attached a label on a bench at the Whitney Museum identifying it as a work of art.

¹⁰Robert Pincus-Witten, Postminimalism. (New York: Out of London Press, Inc., 1977), p. 15.

The similarities to minimalism in the work of the artists the thesis will examine will be apparent. Post-minimalism, like post-impressionism contains aspects of derivation from their parent styles. The strong conceptual element associated with the minimalist style is readily apparent in the work of both artists, as are other derivations such as the absence of chromatic appeal, and the essentially reductive and analytical character of the work. Within these derivations, Andre and Serra find a pictorial, perceptually engaging art, as the thesis will illustrate. The reason for their inclusion however, was not determined for stylistic reasons, rather the use of repetition as form, integral to their work, was the deciding characteristic found to be relevant to the thesis.

PART I

The supposition that repetition is a prerequisite for redundancy is due partly to physiological limitations, and expectational habit. Fovea Centralis, is a small pit or depression at the back of the retina which forms the point of sharpest vision. The area of foveal vision is very narrow; a succession of fixations on, for example, a repetitive wallpaper pattern would not inform us of its continuities unless a previous fixation had left a trace in our immediate or "echo" memory.¹¹ It is not the breaks in continuity which attract our eye but the eye which seeks the breaks. If we do not encounter any breaks in continuity we experience the subjective feeling that the repetitive order moves purposefully toward certain points. We are always ready to expect and supplement continuities unless the opposite is proved. We behave, in other words, as if we could regard continuities as relatively "redundant" while breaks will yield the information we seek. E.H. Gombrich clearly sees deficiencies in the habit of seeking information in perceptual surprize...

¹¹E.H. Gombrich, The Sense of Order, A Study in the Psychology of Decorative Art. p. 121.

On a very general level the theory of information has really taught us to grade information according to the degree of surprize a message may cause us. Conversely the more a message is unsurprising and the more it can be done without, the more we can regard it as redundant... we tend in our lives to equate the surprizing with the unlikely and the expected with the probable. We have seen before that this commonsense equation leads to difficulties which need sorting out before we can hope to profit from a new approach.¹²

The habit of probing the visual field for breaks in continuity effects a disregard, in varying degrees among varying observers, for the information inherent in continuities. Certain continuities play an important role in our perception of the visual world. For example, texture and perspectival gradients:¹³ texture in the uniform grain of materials, the sand of the beach, the grass of the lawn, the ripples of the sea, and the weave of cloth. These continuities make us attend to edges and contours. The perspective effect, resulting in the regular diminuation of these repeat elements, gives us vital clues for our spatial orientation. Renaissance painters first demonstrated the laws of perspective by means of a checkerboard floor; the identical units were structured by size gradient so as to allow for no difficulties in seeing the recession. By extension such a pattern over walls and ceilings, demonstrate how gradients through normal depth perception provide information about objects and their outlines even in a uniform environment.

¹²E.H. Gombrich, The Sense of Order, A Study in the Psychology of Decorative Art. p. 108.

¹³Ibid., p. 111.

The checkerboard floor in Renaissance art implied pictorial space on a two-dimensional surface through gradients of size, value, and texture. A three-dimensional work, on the other hand, has no need to resort to pictorial implications, rather the gradients are realized in our perception of recession in Euclidean space, or ordinary three-dimensional space. The fact that we see only along straight lines is sufficient evidence to account for the diminution of objects at a distance. Thus, a work such as *Twelfth Copper Corner*, 1975 (see illustration 1) by Carl Andre, can maintain identically sized units and still engage our perception of size and textural gradients.

Carl Andre was born in Quincy, Massachusetts, in January, 1932.¹⁴ From 1951 to 1953 Carl Andre attended Phillips Academy, Andover, Mass., where he studied art with Phillip Morgon and met Frank Stella, Hollis Frampton and Michael Chapman. In 1954 he worked briefly at the Boston Gear Works and travelled in England and France. Upon moving to New York City in 1957, Andre renewed his friendship with Frank Stella and Frampton. Andre's first large wood sculptures, made in Stella's studio, bear affinities to the verticality of Brancusi and Stella's stripe paintings. In 1960 Andre completed his "pyramid" series; stacked units that he called "sculptures as structure". From 1960 to 1964 he worked as a freight brakeman and conductor for the Pennsylvania Railroad in Newark, New Jersey. The experience had some effect on his artistic development as his sculpture became "more like roads than like buildings." About 1964 the artist broke away from vertical form and began to move toward "sculpture as place".¹⁵ Using materials such as metal (copper,

¹⁴David R. Godine, 200 Years of American Sculpture. (New York: Whitney Museum of American Art and David R. Godine, 1976), p. 256.

All artists represented in the book have brief biographical information included. Background information on Richard Serra is also from this source.

¹⁵Gregoire Müller, The New Avant Garde, Issues for the Art of the Seventies. (New York: Praeger Publishers, 1972), p. 94.

Müller states, "The emphasis on place implies, that the material *is* the place, but it also implies that it is *in* a place."

aluminum, steel, lead), styrofoam and bricks; Andre made both the material and its properties function as interchangeable components of the work.

Twelfth Copper Corner consists of many copper plates each equal in size resulting in an overall configuration measuring $1/4''$ x $236 1/4''$ x $236 1/4''$. This piece, in plan, is a right triangle with its 90-degree angle laid flush against the walls of a corner, the serrated hypotenuse projecting into the room. The ambiguous title refers not to the numerical position of this work in a sequence of related pieces, but, instead, to the fact that there are 12 copper squares in each row along both walls. In other words, Andre started out in the corner, laid down a row of 12 squares along one wall, returned to the other wall and laid down an adjacent row of 11 squares, succeeded in with rows of 10, nine, eight and so on until he reached the final row with only one square. The repetition of units in the arrangement *Twelfth Copper Corner* utilize what the artist calls anaxial symmetry.

My arrangements, I've found, are essentially the simplest that I can arrive at, given a material and a place--the least conspicuous I can arrive at. Much of this was following the example of Frank Stella and his early paintings--the black paintings and even earlier stripe paintings; trying to arrive at a compositional solution of painting that did not depend on the kind of drama of placements and centering and off-centering and things like that. So I arrived, certainly through the examples and teachings of Frank Stella, at something which I call anaxial symmetry. This is a kind of symmetry in which any one part can replace any

other part.¹⁶

The artist then draws an analogy to the symmetry of his own work with that of molecules in a glass of water...

you can take any atom of the water and replace it with any other one. This has nothing to do with left or right hand or up or down. It's central, anaxial, without axis...¹⁷

The vertical axis of the human figure determines our conception of what is up and what is down in relation to the horizontal axis of the earth's surface, which in turn contributes to our conception of right and left. But in what Hermann Weyl calls the "mathematical philosophy of left and right", the distinction is purely arbitrary.

To the scientific mind there is no inner difference, no polarity between left and right, as there is for instance in the contrast of male and female....It requires an arbitrary act of choice to determine what is left and what is right. But after it is made for one body it is determined for every body.¹⁸

Weyl goes on to state that there are certain crystalline substances called optically active which betray the inner asymmetry of their constitution by turning the polarization plane of polarized light sent through them either to the left or to the right. By this he means that the sense in which the

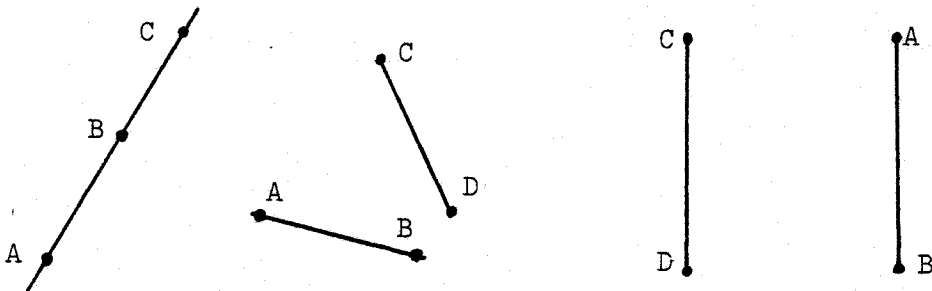
¹⁶Phyllis Tuchman, "An Interview with Carl Andre," Artforum 8, no. 10 (June 1970): 57.

¹⁷Ibid.

¹⁸Hermann Weyl, Symmetry. (Princeton, New Jersey: Princeton University Press, 1952, p. 17.

plane rotates while the light travels in a different direction, combined with that direction, forms a left movement, or a right one, as the case may be. Therefore left and right are *indiscernible*, in that the inner structure of space does not permit us, except by arbitrary choice, to distinguish a left from a right movement.

Hermann Weyl attempts to make this notion more precise by relating it to the theory of relativity. Following Euclid's example he describes "the structure of space by a number of basic relations between points; such as ABC lie on a straight line, ABCD lie in a plane, AB is congruent CD."¹⁹ The structure of space is described by the notion of figures; whereby AB, CD create a plane by virtue of their identity as points of connection that determine a line--one to one mappings or *transformations*.²⁰



"A transformation which preserves the structure of space" a structure that carries any "two congruent figures into two (other) congruent ones" is referred to as an *automorphism*.²¹ This is the "idea underlying the geometric concept of similarity."²² Referring to Leibniz, Hermann Weyl concludes that an automorphism carries a figure into one that is "indiscernible from it if each of the two

¹⁹Hermann Weyl, Symmetry. (Princeton, New Jersey: Princeton University Press, 1952, p. 17.

²⁰Ibid., p. 18.

²¹Ibid.

²²Ibid.

figures is considered by itself."²³ By that he means when stating that left and right are of the same essence is the fact that *reflection in a plane is an automorphism*.²⁴ The congruence of AB, CD as a structure defining a plane, or space has a very high grade of symmetry; best understood by the symmetrical similarity in structure of empty space itself. In empty space every point is like any other, and at a point there is no intrinsic difference between the several directions. Similarity then, occurs in two things which are indiscernible from each other when each is considered by itself. But, two squares for example, in the same plane may show many differences when one considers their relation to each other; variance in surface, light reflection, etc. If each is regarded by itself though, any objective statement made about one will hold for the other; in this sense they are indiscernible and hence similar.²⁵

The variants of surface in the adjoining copper plates in *Twelfth Copper Corner* achieve individual emphasis by regular repetition. Regular repetition, or more specifically, sequence, is characterized by a regularity of pattern whereby no one element takes precedence over another, hence it is without a directional order. Rhythm, unlike sequence, is directional movement or progression, created by a pattern of strong and weak pulsations; an accented repetition. Sequence in poetry, called anacyclic verse, occurs when words can be read word by word equally well from beginning to end or end to beginning.

²³Hermann Weyl, Symmetry, p. 18.

²⁴Ibid.

²⁵Ibid., p. 128.

Is it odd how asymmetrical

is "symmetry"?

"Symmetry" is asymmetrical.

How odd it is.²⁶

The author writes...

This stanza may be considered as an invariant of the transformation of "compound inversion" \bar{I} : a change in the direction of reading (from the end to the beginning) with a simultaneous change in the order of letters in the words produces no change in the sense.²⁷

Twelfth Copper Corner, with its part to part exclusion of an internal hierarchical scale finds its subtle internal differences in surface information due to physical changes characteristic of the work. The radiant, shiny copper surface will alter in time, due in part to the scuff marks left by spectators, many of whom like to position themselves in the corner, which affords a radial view of the triangular floorpiece, and due even more to the air, which tends to induce a greenish, carbonate coating. These surface discrepancies and their subsequent visibility under ambient and radiant light contribute to the aesthetic generosity of the piece. The artists' presence is that of intermediary between the material and its placement within a space. The meaning of the work is in the material and its transposition of the space. Repetition emphasizes both of the qualities: "Placed side by side, words equivalent in meaning give no development of thought, so that a classical translation is rarely encountered

²⁶A.V. Shubnikov and V.A. Koptsik, Symmetry in Science and Art. (New York and London: Plenum Press, 1974), p. 360.

²⁷Ibid.

at the verse level, unless repetition is a means of emphasizing a word."²⁸

Classical translation, and the "rules" of classical composition are becoming increasingly inappropriate as a standard by which to perceive a work. A classical composition is one which is planned "from the outside in", by subdivision. This means that the creative work usually proceeds in stages, with the artist watching the emergent form and considering where to go next. This "juggling" of form within a predetermined boundary creates through the nature of the activity and the arena upon which it is played out, a similar pattern for perception. The manner in which an artwork is made, determines the manner in which it will be perceived. The internal form relationships are mapped out in relation to each other, forms will be proportionately smaller or larger than others, lighter or darker, etc. The procedure of its making provides the procedure for its "reading", the format contributes the axis for directional "reading". Artwork that does not subscribe to a classical translation is one which is planned "from inside out", by repetition and extension. Repetition of a unit provides the artist with the option; one square may mean fifty, a hundred, five hundred--conceivably to infinity. A work employing repetition and extension is not bound to internal axial interpretation, so, as was mentioned earlier, provides the viewer with multiple directions for a perceptual reading. While multiple axial possibilities are best manifested in three-dimensional work, the flat picture plane does exhibit potential for a similar reading.

An artist can "lose" the vertical axis by choosing a very wide format, or, as in painting, by adopting a shaped canvas whose atectonic silhouette

²⁸A.V. Shubnikov and V.A. Koptsik, Symmetry in Science and Art. p. 357.

leaves the viewer suspended among various axial possibilities,²⁹ (consider Frank Stella's irregular polygons and some works in the Protractor series). Alternatively, an artist can suppress the format's vertical axis by introducing multiple symmetries (as in Stella's black paintings). But regular, literally handled shapes usually present us with an implicit dominant axis which guarantees a horizontal or vertical orientation for the work as a whole. A regular shape, or format, such as a rectangular painting best illustrates the potential for internal axis. On the other hand, a three-dimensional work such as *Twelfth Copper Corner*, being without a central axis, does acquire axial dimensions through its spatial orientation, and the viewer's relation to the space.

Achieving spatial orientation within a world of objects implies or projects a shared gravitational field. We are not inclined to taking the experience of gravity as a private experience, but rather we assume that it affects all the bodies and objects around us. So when a visual field is presented on a horizontal plane (floors or ceilings), that innocent tendency results in a sense of dislocation or disembodiment. Artistically elaborated vertical surfaces such as pictures, or wall treatments usually reinforce the stable vertical axis and in turn mobilize horizontal and diagonal axes. On the other hand, artistic elaborations of horizontal planes, like carpets and ceilings tend to invite displacements of direction and imagined depth of field.³⁰ So, the viewer, in upright posture, retains the same line of the horizon as registered visually, with the line of gravity as registered by the body. The horizontal determinates are coincident and inviolated. However, when the visual determinates of the phenomenal vertical are disrupted (as in shallow

²⁹Amy Goldin, "The Body Language of Pictures," Artforum 16 no. 7 (March 1978): 56.

³⁰Ibid.

gallery space without vertical articulated surfaces), the viewer is led to seek vertical spatial cues in the edge of the horizontal plane, creating a sense of disorientation. The viewer can compensate for this by a fixation on the upright plane of the unarticulated gallery wall. Our orientation in the "framework" of an environment is in the most basic sense, dependent upon the direction up-down, and to the plane of the ground. Compensatory movements to initiate sensory orientational response are attempts to *symmetrize* the pattern of input.³¹

Symmetry and the axis that locate it are prime elements in a viewer's relationship to an artwork. Whatever "space" the artist proposes, some definition of the viewer's position in relation to the work cannot be denied. Thus Andre's floor piece reinforces the notion of a shared gravitational field, but defeats the intimacy of a shared vertical position with its attendant horizontal and vertical axis. The viewer's position in relation to the work (standing on it) parallels that of the artist in making it. The viewer perceives the work from the "inside out", following the arranged units extended out from the point of visual departure. In *Twelfth Copper Corner*, there is no center, or point of focus from which the forms emerge, rather the viewer has the option in determining where to stand and consequently, from that point, attend to the piece. Carl Andre elaborates:--

You can stand in the middle of it and you can look straight out and you can't see that piece of sculpture at all because the limit of your peripheral downward vision is beyond the edge of the sculpture. So you can be in the middle of a sculpture and not see it at all--which is perfectly alright. Most people

³¹James J. Gibson, The Senses Considered as Perceptual Systems. (Boston: Houghton Mifflin Company, 1966), p. 61.

don't see it if they arrive in a room and are looking around. I don't like works of art which are terribly conspicuous. I like works of art which are invisible if you're not looking for them. I like this idea about being able to be in the middle of the work.³²

We have seen how, as in *Twelfth Copper Corner*, a work that is planned from "the inside out", by repetition and extension can by implication be said to conceivably stretch to infinity. This conceptualization, due to the absence of an internal hierarchy of form can never be made manifest. It exists only as an idea, because a work must by necessity assume a relationship to its location. The location or "container" in which the work of art is situated has established and finite boundaries; therefore, if a viewer is unable to perceive the extent of the piece due to the limits of peripheral downward vision, the sensory disruption caused by the experience will be countered by the fixation of locational boundaries. The edge of the defined cultural field (the gallery, museum, etc.) provides a counterpart of actuality to an otherwise potentially disturbing conceptual presentation; the viewer is reassured. So as much as *Twelfth Copper Corner* raises the question of viewpoint in terms of its inner structure, it also poses the significance of location, as a vital aspect, to its perception. The location then assumes importance by virtue of its fixity and its inevitability; it becomes the "frame" (and the security that presupposes). By this we can understand that the location (outside or inside) where a work is seen is its frame, or boundary.³³ The location predetermines the spatial extent of viewing, and

³²Phyllis Tuchman, "An Interview with Carl Andre", *Artforum* 8, no. 10 (June 1970): 57.

³³Ursula Meyer, ed., *Conceptual Art*. (New York: E.P. Dutton & Co., Inc., 1972), *Beware!* by Daniel Buren, p. 75.

consequently contributes to the "isolation" of the sculptural configuration. However, at the same time that location informs the limits of a work, so the work defines the location. In this sense a work of horizontal spatial orientation, and an indeterminate internal scale is able to reveal the container in which it is sheltered.³⁴ One realizes as a result that the influence of the location upon the significance of the work is as slight as that of the work upon the location. This consideration has led artists to produce work in a number of varied places, in a variety of ways.

PART II

The perception of an artwork may involve a multiplicity of factors, or it may involve only one. For a critical understanding it is advisable to begin with one and then proceed. The verb is the beginning factor on which to approach the work of Richard Serra.

Born in San Francisco in 1939, Richard Serra earned his way through the University of California at Berkely and Santa Barbara by working in steel plants.³⁵ He later studied with Josef Albers at the New York School, where he received an M.F.A. in 1964. He then spent a year in Italy on a Fullbright Fellowship, where he was involved in performance pieces and the *arte povera* movement. Upon settling in New York City in 1968, Serra began experimenting with new materials, most notably, rubber and neon. In these works he allowed the physical properties of the rubber to interact with the force of gravity to determine the final form of the work. Adherence to the integral physical characteristics of the medium has remained central to his work.

³⁴Ursula Meyer, ed., Conceptual Art. Beware! by Daniel Buren, p. 74.

³⁵David R. Godine, 200 Years of American Sculpture. p. 309.

The transitive verb: to fold, to bend, to crease, to twist, to tear, to split, to cut, to drop, to cast...³⁶ *Casting*, 1969 (illustration 2), one of Serra's many "splash" pieces was done by projecting hot molten lead at the angle formed by the meeting of two planes (in this case the floor and wall of a room). There it instantaneously solidified, preserving the record of the energy necessitated by the projection. The form of the finished piece, including the smallest details, serves as evidence of the pure result of simple actions (melting and projecting) performed upon the material. In *Casting* Serra has performed the action along a determined extent of the angle twelve times, each time removing the cast lead (uncasting), placing it upside down on the floor, next to other uncast splashings. By doing this he demonstrates how, through a simple ordering, the extent of the work is determined solely by when the artist begins and chooses to end the piece, both spatially and temporally. The resulting group of twelve cast lead pieces can be considered as a constant iteration of one operation (c). Casting, or (c) represents the basic action; the structure of the piece, and also the factor upon which the work must be understood.

In perceiving the work from the logical aspect of (c), we are simultaneously considering both the internal structure and extent of the work; the action and the shape of many actions. The latter, as perceptual experience, implies order over disorder. The degree of randomness within the established order of repeated elements is supplanted by perceptual "averaging".³⁷ The "averaging" of an ordered system results in a loss of definition; the inability

³⁶Gregoire Müller, The New Avant Garde, Issues for the Art of the Seventies. p. 94.

Serra compiled a long list of transitive verbs for himself in 1967-68--for the complete list of working notations see p. 94.

³⁷E.H. Gombrich, The Sense of Order, A Study in the Psychology of Decorative Art. p. 6.

of the eye to "take in" more than one object or variable at a time. The perception of regularity results in the viewer forming the preliminary hypothesis that he is confronted with a lawful assembly, and need only sample the elements for redundancies by sweeping the eye along the series and just taking in one repeating component.³⁸ The visual limitations in viewing a system is further compounded with one's predetermined notions of continuities. What we consider a detailed view of something, a coherent image, is really a construct resulting from perceptual generalization; our roving eye covers the visual field under the pretext of piecing together the information.

The capacity for generalization allows for the gestalt to take precedence over internal structural characteristics. A change in shape may have little effect on the whole where the change lies, as it were, off the structural track. This is an aspect of the fact that any visual field behaves as a gestalt.³⁹ Characteristic of a gestalt is that once it is established, all the information about it, "qua" gestalt, is exhausted; one does not, for example, seek the gestalt of a gestalt. Furthermore, once it is established it does not dis-integrate--the viewer is both free of the shape and bound to it.⁴⁰ Free, or released, because of the exhaustion of information about it, as shape, and bound to it because of its constancy. Perceptual problems occur when the viewer equates the simplicity of shape (the visual field as gestalt), with simplicity of experience.

Casting, to recall, is the construct of (c), likewise if the viewers

³⁸E.H. Gombrich, The Sense of Order, A Study in the Psychology of Decorative Art. p. 151.

³⁹Rudolf Arnheim, Art and Visual Perception, A Psychology of the Creative Eye. p. 67.

⁴⁰Gregory Battcock, ed., Minimal Art, A Critical Anthology. (New York: E.P. Dutton and Co., Inc., 1968), Notes on Sculpture by Robert Morris, p. 228.

Morris opens the essay with an interesting quote from Goethe "What comes into appearance must segregate in order to appear."

perception of the work is the construct of (c), a meaningful understanding is possible. For such an understanding the viewer must at one instance perceive the shape, as gestalt, and at the same time disassociate himself from it in order to perceive the structure. Successive units of form require successive individual instances of inquiry. Conceptually (c) as a basic unit of action, presents no difficulties for perception, however, as (c) progresses as an extended structural component over a given length of time and space, so the perceptual problems progress. Ease of perception corresponds to ease of construction.⁴¹ The assumption here, is that the viewer is more inclined to generalities than to specifics; when shape is congruent with form (repetition) as in *Casting*, the potential for a manifest error in perception is obvious. In light of this, a distinction must be made between seeing and attending; to attend involves a comprehensive conceptual and visual engagement. A work such as *Casting* affords the possibility of the sequential conceptual reconstruction of its making, which parallels the purely visual aspects of the piece.⁴² A synthesis of the actual object as it exists now and an apprehension of the process of its manifestation is essential to a comprehensive perception. Merleau-Ponty writes in his major work *Phenomenology of Perception*, "When I say that I see an object at a distance, I mean that I already hold it, or that I still hold it, it is in the future or in the past as well as being in space."⁴³ This extract is taken from his discussion on depth perception which presents the notion that distance as we perceive it, depends upon simultaneous

⁴¹E.H. Gombrich, The Sense of Order, A Study in the Psychology of Decorative Art. p. 96.

⁴²Robert Pincus-Witten, "Richard Serra: Slow Information", Artforum 8, no. 1 (September 1969): 36.

⁴³M. Merleau-Ponty, Phenomenology of Perception. (London: Routledge & Kegan Paul Ltd., 1962), p. 265.

connections of vision between objects, and this simultaneity is contained in the very meaning of perception.⁴⁴ He goes on to state:--

But co-existence, which in fact defines space, is not alien to time, but is the fact of two phenomena belonging to the same temporal wave. As for the relationship of the perceived object to my perception, it does not unite them in space and outside time: they are *contemporary*. The "order of co-existents" is inseparable from the "order of sequences", or rather time is not only the consciousness of a sequence. Perception provides me with a "field of presence" in the broad sense, extending in two dimensions: the here-there dimension and the past-present-future dimension.⁴⁵

Clearly, the pattern of the perceived world is extended both in space and in time; however, the methods of perception of an object differ between space-patterns and time-patterns. The radical difference is, the latter are projected upon a uni-directional parameter; in short, time is an arrow that points to the grave.⁴⁶ Time then, proceeds in a straight line upon which past, present, and future are directional counterparts. Given that Merleau-Ponty's notion of the "past-present-future" dimension reciprocates in the perceptual process, the capacity to go back-forward conceptually is in line with the procedure of art; events in the course of the activity of artmaking are dependent upon the reciprocity of idea and action. When idea and action are joined in a work of similar repeated elements, the reciprocation is made

⁴⁴M. Merleau-Ponty, Phenomenology of Perception. p. 265.

⁴⁵Ibid.

⁴⁶Lancelot Law-Whyte, ed., Aspects of Form. (London: Indiana University Press, 1966), Activity Patterns in the Human Brain by W. Grey Walter, p. 181.

infinitely easier than one which combines disparate parts. The task however, is compounded by the contrast of real and conceptual time. The emphasis in *Casting* is on the process of making, a process so emphatic as almost to be seen as the primary content of the work. The repetition of the process asks the viewer to slow down and observe; to think, as opposed to being entertained. The observer is required to juxtapose actual space and time with conceptual. The actual temporal factor as it relates to the comprehension of space is again limited by our visual acuity. W. Grey Walters writes:--

As is well known, the retina is unlike a photographic film in that the coarseness of its grain is not constant over its whole surface. In a patch about 0.3 mm wide at the center, more or less on the optical axis of the lens system, the light receptors, the "cones", are very closely packed and each is connected to the brain through a private nerve fibre so that images falling here can be resolved in great detail; toward the periphery, groups of cones and the more sensitive but less discriminating "rods" are connected all together to a single common nerve fibre. The consequence of this is that visual acuity--the power to see detail--is high in the centre of the field and falls off markedly at the periphery.⁴⁷

In a work such as *Casting* which subtends say, an angle of 45° at the eye, can be seen clearly only after a series of several hundred glimpses, requiring thousands of co-ordinated eye movements, to say nothing of the mental effort required to link up and remember the many parts. This seems to present the possibility then, in visual perception, that there may be two scanning stages, one involving the eyes themselves and another after the

⁴⁷Lancelot Law-Whyte, ed., Aspects of Form. Activity Patterns in the Human Brain by W. Grey Walter, pp. 186-187.

signals have reached the brain.⁴⁸ E.H. Gombrich proposes yet a third stage in perception that seems in line with the "past-present-future" dimension; that is, the connection of knowledge and/or expectation to perception. He discerns that we cannot separate the problem of perception of form from that process of conditioning that comes from the repeated exposure to a certain style.⁴⁹ By extension, knowledge of everyday phenomenon, such as the continuities that inform our spatial orientation, may be present in our perception through image association. This would seem to explain Rosalind Krass' initial response to Serra's *Casting*:--

...made by flinging molten lead into the angle between floor and wall, pulling away the hardened shape into the center of the room, repeating the gesture, and thereby building a succession of lead strips, as sequential and near alike as waves following one another toward shore.⁵⁰

The procession of cast lead strips unfold before the eye in slow motion, the heavy mass hugging the floor in a continuous pattern of horizontal metal waves. The twelve strips could have been twenty, fifty, one hundred; a continuity of form existing as an interface between natural phenomenon and man-made.

CONCLUSION

Art as a discipline is not unlike any other; it has many problems, and

⁴⁸Lancelot Law-Whyte, ed., Aspects of Form. Activity Patterns in the Human Brain by W. Grey Walter, p. 188.

⁴⁹E.H. Gombrich, The Sense of Order, A Study in the Psychology of Decorative Art. p. 102.

⁵⁰Rosalind E. Krauss, Passages in Modern Sculpture. (Cambridge, Massachusetts and London, England: MIT Press, 1981), p. 244.

every problem has many facets. The thesis has attempted to address one problem, that of form, and narrow the problem to a facet--repetition. The manner in which it has been addressed has unquestionably been concerned with extra-artistic interpretive information. This naturally is only one aspect of the work and its capacity for perception. The problems in art demand an open perspective for analysis; like any discipline one cannot anticipate discovery through an insular approach. If one proceeds to interpret an aspect of art through the perceptual sciences, it is not to suggest that art seeks semantic definition in science. On the contrary--art has never found its significance in scientific mimesis, but at the same time has never been averse to the knowledge of science.

The thesis has sought to interpret repetition as form through the visual example of art, and scientific study, aware constantly of the danger of superficial analogies between the two disciplines. The beneficial role in each field of study resides in the exchange of information. The scientist's curiosity about natural forms ultimately leads him to consider how the mind selects and modifies forms in the processes of perception, thus leading to an examination of the sources of the aesthetic sense.⁵¹ And, the artist who attempts to understand his own activities cannot remain content to regard them as "purely aesthetic", leading the artist inevitably to a broadened understanding of the work, of form, through the example of science. The problems in both disciplines are similar, but similarity is not to be confused with identical planes of inquiry.

Similarity occurs in the fundamental condition of experimentation-- a common alliance which stands to illuminate reciprocal exchange in both

⁵¹Lancelot Law-Whyte, ed., Aspects of Form. Introduction by Lancelot Law-Whyte, p. 4.

disciplines. The artist is compelled to be an experimenter because he has to express an individualized experience through means and materials that belong to the common, everyday world. John Dewey in *Art as Experience* states:--

The fact that science tends to show that man is a part of nature has an effect that is favourable rather than unfavourable to art when its intrinsic significance is realized and when its meaning is no longer interpreted by contrast with beliefs that come to us from the past. For the closer man is brought to the physical world, the clearer it becomes that his impulsions and ideas are enacted by nature within him. Humanity in its vital operations has always acted upon this principle. Science gives this action intellectual support. The sense of relation between nature and man in some form has always been the actuating spirit of art.⁵²

Experimentation is moving data, ideas, concepts from theoretical ground into the precincts of personal, tactile experience. The methods and conclusions of science and art should not remain the possession of specialized experts, but should generate experience and knowledge in mutual exchange, and with society in general. Carl Andre ruminated on this subject in a dialogue with Hollis Frampton in 1962. The quote that follows is a particularly long one, but one that I feel compelled to include as it provides a profoundly accessible insight into the artist's thought-processes, and in turn, his art.

⁵²John Dewey, *Art as Experience*. (New York: Capricorn Books, G.P. Putnam's Sons, 1958), p. 339.

An idea is a pattern of electrical potentials in the cells of the human brain. These patterns obey the laws of electrical circuitry. The matters with which these ideas concern themselves are phenomena which obey laws quite different from those of electrical circuitry. Hence an idea is at best an analogue or model. It must be tested in conditions which are consistent with the external phenomenon. To execute an idea is to recreate the intellectual model in terms of the external phenomenon...

Astronomy and astrology were once one science. They divided out of a fatness of empirical observation, so that we now have a science and a hoax. The hoax of alchemy was split from the science of chemistry. Perhaps the hoax of art will some day be discarded and a system of detailed, accurate, and illuminating perception will become an anchor post for a civilization we have not yet achieved. That means tossing out the magic and the mystery, but I think it means introducing equally the full white light all around...

I have no coherent thought, only a double image. There is the tree of cells, chemicals, atoms. To be human and humane is to want to know and understand that tree. But to be human and humane is to want to sit in its shade and to watch the bell leaves change the sky. Somehow it seems to me not a defect of science that trees cannot thrive in our cities, but a defect in our art.⁵³

⁵³Benjamin H.D. Buchloh, ed., Carl Andre, Hollis Frampton: 12 Dialogues 1962-1963. (New York: The Press of the Nova Scotia College of Art and Design and New York University Press, 1980), pp. 43-44.

The problem with art if it fails to achieve a harmony with life is its consistent self-preoccupation. The notion of internal dynamics of checks and balances tend to diminish a sense of external context--the artist often favouring the singularity of occupation resulting in singular, isolated production. The internal logic of an artwork made from the "outside in", or a relational work, is a logic of balance. You do something in one corner and you balance it with something in the other corner.⁵⁴ In a relational art the artist is jockeying the form around to arrive at an internal composition. For the artist to relate disparate parts, he must assume from the outset that there is a vague whole (the rectangle of the canvas), a priori establishing the extent of the work. This manner of working is within the classical tradition of western art, informing artists and establishing taste--a taste which demands drama, conflict, and contrast as a basic formula for aesthetic response. But the problem is not only of an aesthetic order, it goes deeper than that; it derives from culture itself, the relation between man and the outside world.⁵⁵

The drama that we have come to expect from art as criteria for attention is at opposition to the normal human condition. As E.H. Gombrich states, we subconsciously expect things not to change unless we have evidence to the contrary.⁵⁶ This contributes to our tendency to extrapolate, to "fill in" between instances or forms. Without this confidence in continuity (conscious or unconscious), we could not survive; our senses could not

⁵⁴Gregory Battcock, Minimal Art, A Critical Anthology. (New York: E.P. Dutton & Co., Inc., 1968), Questions to Stella and Judd, interview by Bruce Glaser, Lucy R. Lippard, ed., p. 149.

⁵⁵Susanne K. Langer, ed., Reflections on Art, A source book of writings by artists, critics, and philosophers. (New York: Oxford University Press, 1961), Sketch for a Psychology of the Moving Pictures by Andre Malraux, p. 318.

⁵⁶E.H. Gombrich, The Sense of Order, A Study in the Psychology of Decorative Art. p. 107.

cope with the task of mapping the environment afresh every moment. We visit the art gallery then to experience the unexpected, to "see the world afresh", within the stabilized boundaries of a cultural field. The viewer does not want to be violated by actual experience. Preferring instead to keep art at a "psychic distance" from the ordinary world and his ordinary existence.

Internal conflict and drama is not an issue in the works examined by Richard Serra and Carl Andre. A "psychic distance" from *Twelfth Copper Corner* and *Casting* is improbable, if not impossible. The space they inhabit is ours, indeed we share the same gravitational field. Our physical and conceptual participation becomes an integral part of the piece--we are in fact the counterpart that makes the triad complete. In that instance of our perception we are unlikely to equate the unfolding repetition of form to the comfortably redundant wallpaper in our livingrooms, but will in all probability feel some empathy for Rosalind Krauss' remark, "like waves following one another toward shore."

In the two pieces we have examined, the form is apprehended in terms of non-hierarchical order, and of continuity. All the units in the works are interchangeable--are presented lineally--each unit is similar and each is of equal importance. The units form a consistent inter-relationship of structure (micro-units), that create a group, or macro-structure. Thus the macro-structure, or whole, is not dependent on interval or distance; each unit remains interchangeable, and has the same rank as the others, without disturbing the continuity of the whole.⁵⁷ The interchangeability of the units and the lack of hierarchical order is further enhanced by the lack of dominant axis. The arrangement of form, as seen in *Twelfth Copper Corner*, which can be read up and down, diagonally, back and forth in any direction, illustrates the capacity

⁵⁷John Coplans, Serial Imagery. (published by the New York Graphic Society in Association with the Pasadena Art Museum, 1968), p. 11

of non-hierarchical structures to interact with an environment, not by juxtaposition, but by transposition. This leads us back to a statement by Carl Andre in which he expresses his interest in artworks that are invisible if one is not looking for them (p. 16). Similarly, the sand on the beach is invisible if one is not attending to it, but nevertheless it is always there.

REFERENCES CITED

- Arnheim, Rudolf. Art and Visual Perception, A Psychology of the Creative. Berkeley and Los Angeles: University of California Press, 1974.
- Battcock, Gregory, ed. Minimal Art, A Critical Anthology. New York: E.P. Dutton and Co., 1968. Notes on Sculpture, by Robert Morris.
- Battcock, Gregory, ed. Minimal Art, A Critical Anthology. New York: E.P. Dutton and Co., 1968. Questions to Stella and Judd, interview by Bruce Glaser, edited by Lucy R. Lippard.
- Buchloh, Benjamin H.D., ed. Carl Andre, Hollis Frampton: 12 Dialogues 1962-1963. New York: The Press of Nova Scotia College of Art and Design and New York University Press, 1980.
- Coplans, John. Serial Imagery. Published by the New York Graphic Society in Association with the Pasadena Art Museum, 1968.
- Dewey, John. Art as Experience. New York: Capricorn Books, G.P. Putnam's Sons, 1958.
- Gibson, James J. The Senses Considered as Perceptual Systems. Boston: Houghton Mifflin Company, 1966.
- Godine, David R. 200 Years of American Sculpture. New York: Whitney Museum of American Art and David R. Godine, 1976.
- Gombrich, E.H. The Sense of Order, A Study in the Psychology of Decorative Art. New York: Cornell University Press, 1979.
- Krauss, Rosalind E. Passages in Modern Sculpture. Cambridge, Massachusetts and London, England: MIT Press, 1981.
- Langer, Susanne K., ed. Reflection on Art, A Source Book of Writings by Artists, Critics, and Philosophers. New York: Oxford University Press, 1961. Sketch for a Psychology of the Moving Pictures, by Andre Malraux.
- Law-Whyte, Lancelot, ed. Aspects of Form. London: Indiana University Press, 1966. Activity Patterns in the Human Brain, by W. Grey Walter.
- Merleau-Ponty, Maurice. Phenomenology of Perception. London: Routledge & Kegan Paul Ltd., 1962.
- Meyer, Ursula, ed. Conceptual Art. New York: E.P. Dutton & Co., Inc., 1972. Beware!, by Daniel Buren.
- Morris, Robert. "SOME NOTES on the Phenomenology of Making: The Search for the Motivated." Artforum 8, no. 8 (April 1970): 62-66.
- Müller, Gregoire. The New Avant Garde, Issues for the Art of the Seventies. New York: Praeger Publishers, 1972.

- Munroe, Thomas. Form and Style in the Arts: An Introduction to Aesthetic Morphology. Cleveland and London: The Press of Case Western Reserve University in collaboration with the Cleveland Museum of Art, 1970.
- Pincus-Witten, Robert. Postminimalism. New York: Out of London Press, Inc., 1977.
- Pincus-Witten, Robert. "Richard Serra: Slow Information." Artforum 8, no. 1 (September 1969): 34-39.
- Rose, Barbara. "Problems of Criticism, VI, The Politics of Art. Part III." Artforum 7, no. 9 (May 1969): 46-51.
- Shubnikov, A.V., and Koptsik, V.A. Symmetry in Science and Art. New York and London: Plenum Press, 1974.
- Tuchman, Phyllis. "An Interview with Carl Andre.: Artforum 8, no. 10 (June 1970): 55-61.
- Weyl, Hermann. Symmetry. Princeton, New Jersey: Princeton University Press, 1952.

THESIS SUPPLEMENT

The succeeding pages should be thought of as a complimentary essay which adheres to the subject of the thesis, but approaches it from a somewhat different perspective. The main text of the thesis attempted to examine repetition as a form of composition from a pragmatic standpoint; bringing together art, scientific knowledge, and philosophy, I deliberately avoided drawing any references to my own artwork into the foray of thesis research, deciding instead to approach the topic as objectively as possible as evidenced by the artworks cited and subsequent research material.

The objective analysis behind, I wish now to illustrate by personal example my interest and use of repetition as a method of composition. Interest resides first in idea, then in its manifestation. All ideas in art proceed in an evolutionary manner from generalized inception through varying stages of complexity to eventual maturation. Fortunately the evolution often follows a pattern. A pattern which assumes increasing clarity, as experimentation heightens the powers of observation and enriches knowledge. I will use the process of inquiry into ideas, as a context from which to extract examples of how repetition has occurred in my work.

Allowing myself the indulgence of autobiography, I will begin by reaching back to approximately 1972 for an example of an early creative outpouring. The following is an excerpt from a poem entitled *Alley*:--

White greying seagull
silhouetted in the stale shadow alley
evening.

charcoal roofs
and red brick
white fading houses
slipping into an ocean
of languid expression.

The significance of these run-on lines is not found so much in repetition as in rhythm. The pre-dominance of two-syllable words with equal accents (sea' gull, al'ley, fad'ing...) establishes a rhythmic punctuation informing the

character of the poem. One is further made aware of the rhythm by the sentence structure. Open form, or "free-verse" utilizes white space for emphasis, and short or long lines to accommodate the meaning of the poem. Long pause, words, long pause, punctuation, followed by a rapid succession of short lines of equal length--ending in unexpected irony, in apposition (into an ocean of languid expression).

Alley and other verse was written from the position of process, as opposed to a quest for poetic excellence. The form, in its raw state, evolved from the act of writing, and only later and only marginally, did any craft enter its creation. The act of composing poetry and the act of art-making are for me, of one and the same nature. Similarly I hold visual imagery and structure in poetry, as in art, to be central to their success. It is not enough to simply respond to sensory experience, even though one may be equipped with a vast arsenal of expressive words and form. One must make the response coherent.

Thus the problem emerged of how to translate my inclinations for rhythmic structure and process into a visual art form. Again, I must distinguish between the concern for art as a finished product and the activity of art-making. I wanted to find a way of putting down marks on a two-dimensional surface that complied with my rhythmic sense, that maintained the kinetic base in the finished work, but was not subjugated by image. I was not content to let the graphic topology be carried by kinetic energy alone. The following illustration (see illustration 3) will help to convey how I resolved the problem. *Blues for St. James the Elder*, 1976 is a free interpretation or pastiche, of a painting by El Greco.

The procedure I adopted was to control the gestural activity to the point where line assumed two responsibilities which at that time were important to me. First, they retained their linear autonomy, secondly, they were able to create flat tonal area. Transformation to tone occurs when the gesture of line

(mark) is consciously repeated over an extended time in a defined space. This causes the lines to merge in a density of pattern of increasing flatness, as application of line increases. Where flat tonal areas appear they begin to create rhythmic impulses over the picture format. These dark accents are controlled (held in place) by value range and linear pattern activity throughout the surface. But, the line or mark in the picture still serves its age-old function; it delineates form. And form becomes image. The problem then was to find, within the "species of mark" and the methodology of mark-making, an autonomous structure independent of external referential images. I was observing about this time, that size of marks were beginning to exert an identity as form, rather than a means of delineating form. The denser the overlay of marks became, the more that area began to resemble an exploded version of the very component of initial construction. One mark repeated a hundred times became again one mark. It only altered in size. This observation led me to consider the mark as image.

Free now to create self-referential art, I embarked on an exploration of mark-making. The ensuing pictures made every possible use of "mark about mark", of art about art-making. Marks were repeated beside marks, alluding to form but never attaining it. Marks on top of marks became pattern, implied texture, and always declared themselves as image. The working procedure was repetition. Repeating the image (the mark) over the picture plane, stopping short of the arbitrary. Repetition creates, by virtue of its symmetry, a danger of redundancy. This danger proved to be the greatest challenge, and the greatest failure of this period of activity. The resulting drawings were characterized by a large quantity of failures, some moderately successful, and very few of any consequence. What went wrong? It was my feeling that although graphic marks had an exciting vocabulary on their own, they were unable to sustain interest over an extended durational interpretation. In short, it did not take long to exhaust their range of possibility; they began to look shallow.

The only recourse then, was to bring analogy back to my work. Analogical research information was supplied by photographs of urban situations, natural environments, man-made structures; literally anything and everything I responded to. Naturally, my involvement with pattern, rhythm, and repetition influenced my response to visual phenomenon. All photographic material bore some relation to that interest. The visual sources were supplemented by written notations; sketches and readings relevant to my concerns. Once the reference material was assembled and absorbed, I set about the problem of synthesizing what I had learned into a finished art-form. The subsequent activity was governed by one principal consideration: if a graphic equivalent was to be found in extra-artistic sources, then those sources would have to serve a peripheral function in the final work, as opposed to a central one. I wanted to keep any references on the edge of assimilation, and hold them there throughout the development of the work. Content is important in my work, not subject matter. But, art is not the product of imagination alone. Therefore, ideas find support in subject matter and through the creative process, undergo a transformation to emerge as content; as art. The following example will help to illustrate what I mean.

Five Forms (black and grey) 1982 (see illustration 4) is in the most primary sense, a graphic depiction of ten rectangles, five black and five grey. Their orientation is horizontal and repetitive. The black portion of the picture occupies more actual space than the grey, thus appearing to assume greater pictorial importance. However, the grey area being lighter by comparison, and having a much more active surface is equally strong despite its lesser coverage. As a result the viewer is faced with the perceptual problem of simultaneous contrast. This contrast is one of value, and of areas of interest; defeating the notion that black should recede, becoming background for the emergent grey. Both areas sit equally flat on the picture plane. The more literal connotations are left to the viewer's interpretation. Are the forms referring

to architecture, to landscape, to the human form...? Does their repetition and lack of referential information imply anonymity, desolation, or commonality...? These questions and any answers are purely subjective. My artwork is meant to stand on its own as an autonomous object. Any external implications are secondary.

Good art has always been based in tradition and experimentation. Tradition being a relative context within which one can find and measure one's own position. A knowledge of tradition, both of an art and extra-artistic nature affords one the choice of accepting or rejecting (at least learning from), those things based in that context. Experimentation is founded in knowledge, observation, and creativity. An idea provides the impetus for experimentation. This is the formula from which the complex process known as art-making begins. It hardly matters whether the impetus is repetition, mythology, or anything else. What does matter is that it be pursued with intelligence, open-mindedness, and sincerity.



Illustration 1

Carl Andre, Twelfth Copper Corner, 1975



Illustration 2

Richard Serra, Casting, 1969
lead, 26'X 14'X 10"

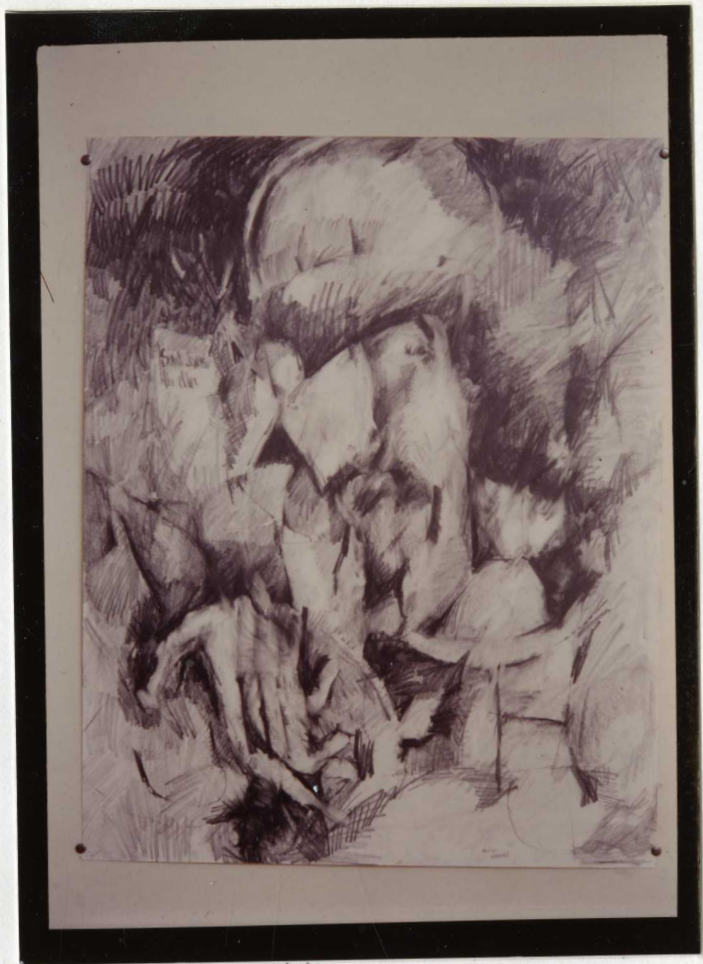


Illustration 3
Blues for St. James the Elder
22"x228"

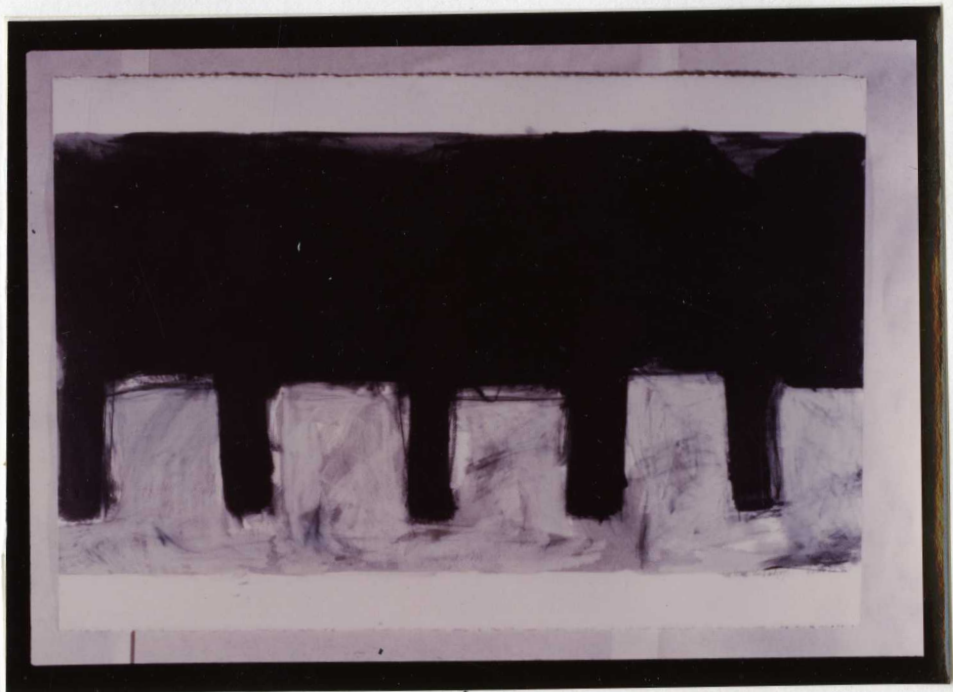


Illustration 4
Five Forms
32"x 44"