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No. 3. Center right. Richard Alpert. *Twist*, oil on fiberboard, 62 x 93 x 73 inches, 1981.

Tracks of Motion in an Enclosed Space: Connections Between Performance and Visual Imagery

Richard Alpert

Abstract—The author traces three stages in the development of his system for making art and the influence of scientific ideas on that system. He begins with performance artwork, explores painting as a record of process, investigates the impact of pattern and color on perception, and then moves to the use of geometric patterns. Alpert examines the two spheres of meaning expressed in his performance artwork: one based in a humanistic outlook, the other in scientific ideas and terminology. The process used to make the performance-inspired paintings is described as the simple action of shaking paint in a box, further elaborated into a scheme for the production of visual images.

I. PURE PERFORMANCE

In 1974 I exhibited a performance art piece entitled *Probe* (Figure 1). The performance space, a turn-of-the-century brick and wood building, was divided into a light half and a dark half. I began the performance by standing in the dark half and kicking a ball against the back wall of the light half of the space. With each successive kick, I shortened the distance between myself and the back of the space, until I was so close to the wall that I could no longer kick the ball. I then moved back towards the dark half of the space, kicking the ball in the same manner. This activity continued for about 20 minutes. The closer I moved to the wall, the more direct was the path of the rebounding ball and the more intense was the sound in the space. Conversely, as I moved further from the wall, the path of the rebounding ball became less direct, I had to expend more energy to return the ball, and the sound became more diffuse.

I was initially interested in exploring the resonant sound character of the space by striking its different material surfaces with an object that would allow the changing audio rhythm and tempo to be visualized. My physical action expressed an exploration of the relationship between my body and the surrounding enclosure. I also found the piece not only expressed art considerations, but also concepts from the scientific realm [1].

The fact that the action of the ball within this confined space appeared random suggested to me a molecular particle in motion. Changes in my physical position in the space during the performance represented changes in the



Figure 1. *Probe*, performance, 1974. This work explored the resonant sound characteristics of a space by striking its different material surfaces with a ball. The rhythm and tempo of kicking the ball and the intensity of the sound varied with my distance from the back wall. In addition, the light/dark format allowed me to 'color' the space, changing it in visual texture. (Photo: Christine Alpert.)

volume-pressure relationship as established by Boyle's Law for gases and depicted in scientific diagrams as molecular particles in a variable container/volume. It followed loosely that the volume was defined by the space between my body and the wall and that the pressure was represented by variations in the intensity of the sound of the ball—the higher the pressure (that is, the closer I was to the wall), the lower the volume.

The visual division of the space into a light half and a dark half symbolized a kind of cause (pure sound of 'kicked ball') and effect (sight of 'kicked ball'). In addition, the light/dark format allowed

me to 'color' the space, changing its visual texture. I began to think of this activity in an art-historical framework as 'working the space'. The performance had a built-in unpredictability due to my relative lack of skill in control of the ball and the nonuniformity of the walls' surfaces. This unpredictability, and my relinquishing of control, expressed my fundamental persuasion that randomness is essential to the creation of new orders in making art [2]. This idea was reinforced for me by Gregory Bateson's *Mind and Nature*: "... the realms of ... evolution are, at a deeper level, typified in the twin paradigms of the second law of thermo-

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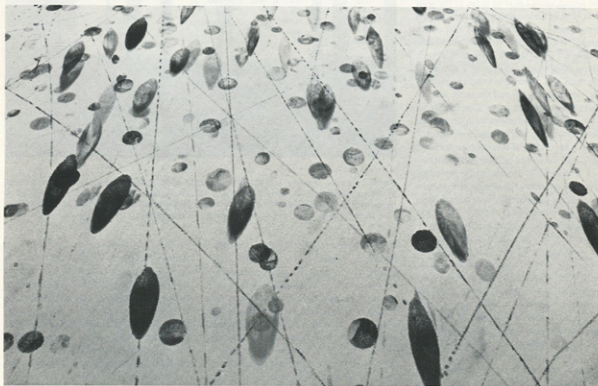
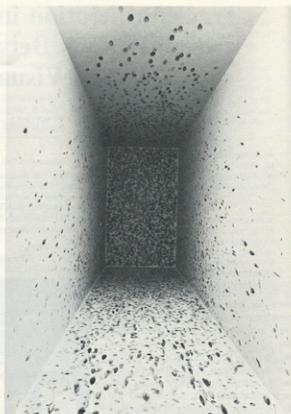


Figure 2a,b,c. *Ricochet*, installation/painting, oil-block ink on plasterboard, 6 x 10 x 24 feet, 1978. The markings varied according to the types of impacts made by the inked ball. A flat impact on the back wall produced a circle; passing impacts on the ceiling, floor and side walls became ellipses; and lines were tracks of the ball rolling across the floor.

dynamics: (1) that the random workings or probability will always eat up order, pattern and negative entropy but (2) that for the creation of new order, the workings of the random, (entropy) is necessary. It is out of the random that organisms collect new mutations and it is there that stochastic learning gathers its solutions" [3].

Probe also contained humanistic symbolism in representing the interaction between the individual and the environment, both in the realm of personal exploration of the physical world and in the sometimes antagonistic relationship between the individual and society. As an object associated with play, the ball conjured the image of children testing notions of their world against varying real-life situations and making appropriate accommodations in response to their discoveries. I imagined the raw and sometimes violent energy expended during the performance to be like that of the adolescent who, suddenly aware of the fortresses of cultural conventions and their consequent restrictions on individual expression, reacts against them. Individuals probe, question and test forces perceived to control and constrict their lives and in the same way the artist uses studio and exhibition space in the art-making process to expand the boundaries of art.

II. VISUAL IMAGES RESULTING FROM WORKING INSIDE THE ENCLOSURE

Armed with the information from *Probe* I began constructing paintings on the same large scale. I devised a system based on the simple printmaking technique of stamping with ink. My decision to use a large-scale format was founded on the notion that large paintings would clarify and focus one's perceptual experience of color and depth. A large painting could function as an eye-mind test to heighten awareness of the effect of color and perspective on the perception of depth. The result of this inquiry was the installation painting *Ricochet*, 1978 (Figure 2a), whose format was a freestanding, narrow room, constructed of plasterboard and open at one end. I used a color gradation scheme and worked the space by hitting a rubber ball against the white walls with a paddle coated with colored oil-block ink (Figure 2b). The variety of marks produced ranged from circles (as the ball hit flatly against the back wall) to ellipses (as it skipped off the side walls, floor and ceiling) to lines (as the ball rolled back on the floor) (Figure 2c). Looking into the space gave me the sense

of a color implosion toward the back wall, a flattening of the exaggerated depth of the room by a pointillistic color pattern.

As in *Probe*, *Ricochet* also reflected my concern with sound. Here I was interested in the perception of two different qualities of sound, one within the painted room, and one outside in the surrounding larger space. While I was standing within the small room my experience of the discrete forms as very lively and brightly colored was matched by the heightened intensity of the live and bright sound. In contrast, while I stood outside the room observing from some distance, my perception of the painted surfaces flattened the space and the surrounding sound also became flat.

III. VISUAL IMAGES RESULTING FROM WORKING OUTSIDE THE ENCLOSURE

To produce more traditional art on a smaller scale, I applied a variation of the system developed in *Probe* and *Ricochet*. I decreased the size of both the space and the mediating object. I moved from using a basketball to a tennis ball to a ping-pong ball, and I decreased the size of the space until I was necessarily physically external to the space where the motion was occurring. At this point I began to consider (1) a closed form as a container for a process; (2) the interior surface of the enclosure as both a variable documenting surface and a recording device; (3) the marking qualities of different materials as they impact upon a surface; and (4) the specific variables (duration of

the motion, direction of the agitation or the enclosed materials) in the method of applying the paint.

With these concerns in mind, I constructed rectangular boxes with six pieces of lightweight ragboard and assembled these surfaces using pressure-sensitive tape. One side was hinged to allow access to the interior during the process. Various materials were then enclosed within the box and it was shaken for varying periods of time. In this first series, the configuration of the containers served both as three-dimensional forms for a process and as a form for the documentation that resulted when the containers were unfolded and flattened. The materials enclosed included varying combinations of broken glass, heated steel ballbearings, graphite bars, encaustic and oil pastel. I experimented with applying abrasives, adhesive films, and solvents to the interior surface of the ragboard. The resulting documents comprised a record of the interaction of individual materials within this system (Figure 3).

The next direction of this inquiry was determined by the changes in viscosity I observed when solidified oil-based pigment was introduced into the process. By introducing steel ball bearings and by shaking the forms for a longer time during the application of one color, I could get the paint to 'flow', thereby increasing my control of the surface coverage. Thus, I could articulate the pattern and construct a color gradation scheme. The order and method used to apply colors were structured so as to enhance the internal patterns established

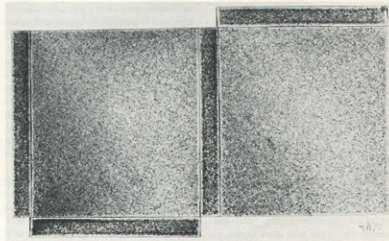


Figure 3. *Mix*, drawing, graphite on rag board, 20 x 30 inches, 1975. I used rectangular boxes to enclose various combinations of broken glass, heated steel ballbearings, graphite bars, encaustic, and oil pastel. The boxes were unfolded after shaking to display the record of this process. Within the confines of this system, numerous variations were possible depending on the duration of the shaking and the direction in which the materials were moved.

by the moving agglomeration of oil-based pigment. This resulted in a series of two-dimensional paintings made from varying sizes of regular rectangular containers.

The painting procedure began with prolonged shaking of the box with a light color paint inside, resulting in a broad surface coverage. I applied progressively darker colors, one at a time, shaking the box for progressively shorter times for each color. (I adjusted the color gradations through combinations of tinting and chromatic change.) The darker colors accumulated primarily around the perimeter of each of the six planar surfaces and were densely concentrated in the corners. The maximum size of an 'individual painting unit' was limited to what I could physically hold and shake. The internal pattern was determined by the configuration and size of the three-dimensional form, how that form could be held and moved, and my ability to find a motion that would keep the agglomeration of paint moving. The composition of the particular solidified oil paint I used also determined the final form of the painting. The safflower-oil-based vehicle in titanium white tended to become adhesive as its viscosity changed due to temperature increases during the process.

This series of paintings made me aware of the importance of communicating the art process in the finished work, and I began working towards developing the 'readability' of the process in my wall paintings. While I wanted to maintain conceptual complexity and richness, I also wanted to provide evidence of the technique to make it possible for viewers to decipher how the work was produced. Towards this end, I made a major design change in structuring the color application and in the presentation of the resulting painting experience. The solution I found was akin to the mathematical operation of summation, its symbolic notation, and my own visualization of this concept.

What followed was a group of paintings each containing a partially folded form or forms representing the accumulation of all the discrete component colors displayed sequentially around the central form (see color plate No. 3). Since the size of the central unit tended toward the maximum limit determined by my physical size, the final method of assemblage expanded the potential size of the wall work exponentially. The magnitude of these paintings approached the visual impact of *Ricochet*, but with the advantage of being portable. The work's arrangement evoked the idea of self-referentiality: the paintings conceptually folded back on themselves by

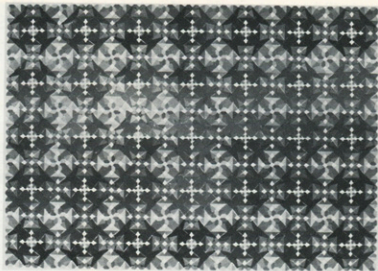


Figure 4. *Plane Array*, painting, oil on gessoed paper on canvas, 86 x 118 inches, 1983. The geometric array is the result of putting together many individually painted food containers. These specialized boxes lent themselves to repeated unfolding and refolding during the application of paint and to building a similar color structure within each container. When assembled, the array exhibited the visual/perceptual phenomenon of 'regrouping'. In regrouping the outside boundary of one unit in the overall pattern 'shifts' to define a different unit so previously unnoticed visual images become apparent to the eye.

displaying the evidence of their own process of evolution.

IV. PERCEPTUAL CONCERNS

As a variation on the idea of three-dimensional form used to contain process, I also experimented with small commercially manufactured boxes used to package colored drawing ink. These boxes could be unfolded and refolded in numerous ways so that the flaps of the box either covered or exposed sections of the interior surface. The addition of this variable to the painting technique allowed a pattern to be built within the individual container, retaining the unique record of the movement of the material pigment. Unfolding and refolding the box between applications of paint caused some panels to have one to several layers of color and other panels to receive all the color applications. The unfolded box displayed the panels that had received fewer applications around the periphery and the panels that received all applications in the center.

At this point, from my understanding of viewers' reactions, I began to feel that readability was less important than the overall color and pattern in the work. I started to work with commercially produced food containers that could be manipulated in much the same fashion as the ink boxes but had the added feature of an approximately radial symmetry when opened and laid flat. This symmetry lent itself to building large arrays of these

painted units. This method of building the painting from many smaller parts introduced a perceptual phenomenon that dominates my most recent work (Figure 4). I explored changing the positions and intensities of specific colors within the individual units as well as the results of those changes on the overall complexity of the array. In doing so I became aware of the effects of a visual phenomenon called 'regrouping'. Regrouping is the refocusing of attention from one location to another in the process of scanning a pattern. The outside boundary of one unit in the overall pattern shifts to define a different unit and structures that had been 'submerged' and 'invisible' become apparent to the eye [4]. Regrouping is a cognitive mechanism that is "a delight to the subtle combination of the eye and mind that is most sensitive to pattern" [5]. Hence, at any given moment the painting will actually appear to be different from at any other moment. This aspect in the work speaks to the abstract expressionists' cliché that everyone reinterprets such works according to a game of free association. The multiplicity of possible readings of my work is a physiologically induced function of the pattern painting itself as it acts upon the viewer.

Choosing a purely geometric structure affirmed my aesthetic view that beauty and visual interest are best served by the pure perceptual experience spawned from the complexity and subtlety of the

interplay of abstract forms [6]. These geometries exist in nature, and so extend beyond my personal history.

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6. Hofstadter [5] p. 16.

GLOSSARY

Boyle's Law—thermodynamics. The principle that, for relatively low pressures, the pressure of an ideal gas kept at constant temperature varies inversely with the volume of the gas.

The following terms and definitions are from G. Bateson, *Mind and Nature* (New York: E. P. Dutton, 1979) pp. 227-230.

entropy—the degree to which relations between the components of any aggregate are mixed up, unsorted, undifferentiated, unpredictable, and random.

negentropy—the degree of ordering or sorting or predictability in an aggregate. In physics, certain sorts of ordering are related to quantity of available energy.

random—a sequence of events is said to be random if there is no way of predicting the next event of a given kind from the event or events that have preceded and if the system obeys the regularities of probability. Note that the events which we say are random are always members of some limited set. The fall of an honest coin is said to be random. At each throw, the probability of the next fall being heads or tails remains unchanged. But the randomness is within the limited set. It is heads or tails; no alternatives are to be considered.

stochastic—(Greek, *stochazein*, to shoot with a bow at a target; that is, to scatter events in a partially random manner, some of which achieve a preferred outcome.) If a sequence of events combines a random component with a selective process so that only certain outcomes of the random are allowed to endure, that sequence is said to be stochastic.