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All Systems Go

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ALL SYSTEMS GO

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A Thesis Submitted in Partial
Fulfillment of the Requirements
for the Degree of

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ALL SYSTEMS GO

HARRY W. SIDEBOTHAM II

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CHAPTER I

WORKING THE SYSTEM: BECOMING THE MACHINE

Everything can be broken down into smaller, oftentimes invisible parts; from monolithic architecture to the atoms that make up all living things, everything is made of modules. In nature, systems of organization regulate modules by locating them within an ideal logic. My paintings emulate natural systems of organization by manipulating modules and creating organizational systems.

There are many strategies I employ when devising painting systems, but no matter how it's carried out, the system itself is the work of art. Paintings and sculptures are the just the visual output. Likening myself to a machine, at the mercy of the systems I create, aids the creation process. I am less concerned with perfection in that mindset, as a real machine is not cognizant of its performance; it simply executes the task at hand. However, a machine's perfection is inherent, as long as it's functioning properly. If I achieve perfection is based on skill and sometimes luck. After implementing a system once,

I am "programmed" to complete the process again, if desired. I have a general idea of a system's outcome and can repeat or duplicate almost every painting, although not with exact precision. Similar to Sol LeWitt's ideas of conceptual art, my systems consist of a set of instructions to follow. However, my instructions are difficult to understand, I am the only one who can interpret and complete them.

Math and science play a large role in my research and inspiration for creating new works. Although mostly focusing on painting, I have branched out into sculptural, time-based, and perfomative work and have expanded my range of materials. My most recent body of work is influenced by string theory, parallel dimension theory, and the writings of Bridget Riley and Brian Greene. I am devoted to exploiting systematic painting by way of systematic disruptions with use of organic forms like portraiture and manipulation of paraxial imaging properties, on appropriately shaped surfaces.

CHAPTER II

PARAXIAL IMAGING: MAKING WAVES

Discovering and manipulating ocular sensations activated by static images is the main strategy of my paintings. I construct images that are hard to look at because the eye has a difficult time processing the information it's presented with and emergent qualities continuously appear and disappear while viewing. One of the chief strategies I use to achieve such results is paraxial imaging. Bridget Riley and other Op artists referred to paraxial imaging as phantom energies or phantom colors. In optical science the effect is perceived to exist because of light and environmental color reflecting off the eye's lens before being interpreted by the visual cortex.

Bridget Riley wrote about the phenomena of phantom energies and phantom colors that appeared in her work during the 1960's and 1970's. Later scientific studies define the effect Riley wrote about as paraxial imaging. I have been inspired by Riley's work and writings and am attempting to manipulate this phenomenon in my current body

of work. Paraxial imaging occurs most significantly when looking at a gradient or tightly spaced parallel lines, which create pulsating phantoms colors (colors not actually present in the work). A great example is Bridget Riley's *Blaze 1*. It is a black and white painting where the paraxial imaging results in brilliant flashes of light value and low intensity colors such as yellow, blues, and reds/pinks.

My work explores the ways paraxial imaging can be manipulated and how the phenomenon can be forced onto the viewer through subtle underpainting and systematic use of value and shape. I use the high contrast of black and white, coupled with repetition to achieve a vibrating or breathing affect. As contrast diminishes so do the ocular sensations, allowing me to control where and when they occur. A strong example of paraxial imaging in my work is *Parallel Dimension No. 5*. The painting is divided into two sections of high contrast by three sections of lines very close in value occurring in the middle and both edges. This situation causes phantom colors to rise out of the segments of high contrast. The undulation of the system creates an uneasy and intense sense of movement.

CHAPTER III

ANOTHER DIMENSION, ANOTHER DIMENSION,

ANOTHER DIMENSION, ANOTHER DIMENSION...

"In the early days of string theory, physicists encountered pernicious mathematical flaws (quantum anomalies) entangling unacceptable processes such as the creation and destruction of energy. Later they discovered the problematic features were entwined with the number of dimensions in space."[1]

The above quote from Brian Greene illustrates that extra dimensions, those beyond our spectrum of vision, must exist in order for string theory to bridge the gap between quantum mechanics and general relativity. Not only that, but these extra dimensions exist concurrently in space-time with our experienced dimension. I wonder if these extra dimensions can ever be viewed or experienced, and how my paintings might facilitate their recognition. Can paraxial imaging can be used as a tool to render these intangible dimensions visible, or is possible that paraxial imaging itself is a by-product of experiencing hidden dimensions?

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[1] Brian Greene, *A Hidden Reality: Parallel Universes and the Deep Laws of the Cosmos* (New York: Random House Inc., 2011), 96.

I use fractal based, pentagonal geometry in order to balance the elusive nature of paraxial imaging and parallel dimension theory. *Parallel Mees* is a large pentagonal shaped canvas with a fractal pentagonal pattern featuring medium and small sized pentagons. The fractal pentagonal breakdown is outlined with a 1/8-inch line, creating the underlying grid and structure of the painting. This grid forms a perceptually unbroken and constant line that simultaneously anchors the painting while pushing illusory shapes such as dodecagons forward. The fractal breakdown also results in the creation of isosceles triangles where two pentagons meet, creating an intermediary shape and a break from the intensity of visual stimuli. I have found that accidental disruptions in the systems can cause small fluctuations in how the painting is read. With this in mind, I create controlled systematic disruptions and this adds another level of perceptual complication using the disruptions as niches for the greatest controlled system disruption of all: figuration.

Parallel Mees contains five images of myself with different facial hair and hairstyles. The changes in the system surrounding the images are easily discernable but the images themselves are hidden. The interruptions create

an intense viewing experience by confounding the predictable systems. If Brian Greene is correct and there are many parallel dimensions, are there parallel versions of myself? If so, do any of my parallel selves think about me? Could *Parallel Mees* serve as multi-dimensional conduit, allowing the parallel versions of myself communicate?

The Father System No. 2 is another painting with figurative systematic disruptions. *The Father System No. 2* is a portrait of my biggest source of inspiration, my late father, Joseph William Sidebotham. The base layer or underpainting features his portrait as a single layer stencil in a light-value violet. The image itself is the same image he used in his self-portrait from 2012, *The Artist as an Old Fart.* While cleaning out his studio after his death, I came across the source image and used it for *The Father System No. 2.* It was important to use the same image he did as well as his brushes and paint in order to feel connected to his practice.

Prior to his death, my studio practice was heavily influenced by extended conversations with my father about geometry and painting technique, and by an ongoing, unspoken competition between us. I was drawn to collecting

information on subjects I might not have otherwise been
interested in for the sole purpose of sharing it with him,
hoping to influence his practice as he did mine. I'll never
know if I succeeded.

In another dimension, this query is answered and by
making a portrait of him with his materials, I feel more
connected to him and his practice and hope that if he is
alive and well in another dimension, perhaps he can see me
and communicate with me through *The Father System No. 2.*

CHAPTER IV

EJECTING THE RAINBOW

I paint without color for a variety of reasons. The
most deeply rooted reason has to do with the house I grew
up in. My father painted every wall, piece of trim and door
panel a different, intense color. Being surrounded by so
many colors as a rebellious teen caused me to appreciate
value and form more so than color relationships. For that
reason, coupled with my father's extensive use of color in
his own paintings, I reject color in my practice. This is
not to say that I have never made a painting with color,
but in the last five years, I have weaned myself from the
dependency of color.

I am primarily concerned with purity of form, through
a focused lens. Eliminating color in my painting is a way
to control the variables in a painting and how it is read.
Removing color, the decision-making process is a matter of
which way a gradient fades and whether or not it interacts
with or overlaps another gradient system. Most of these
decisions are made by the use of logic, by which I mean

that a shape is always outlined with gradient stripes starting at either the outer edge working towards the center, or starting at the center working toward the outer edge.

In *Nonagon*, the system is working in both directions. Where the two gradients interact there is a sequence of lines very close in value that results in the lines appearing blurred or "greying out." In addition to this phenomenon, hexagons emerge from the center where the intersecting gradients are closest in value. The interaction of the gradients is one of the most important aspects affecting the paraxial imaging properties, which would not occur if color were present.

Another reason I have not worked with color is that I want my paintings to be an egalitarian viewing experience; all people, from infants to adults, have a similar viewing experience of a painting. Newborns have great difficulty distinguishing colors, which is why they love high contrast patterns. Furthermore, people born with achromatopsia, the inability to see color, can see the paintings the same way someone with perfectly functioning eyes can.

CHAPTER V

HEXAGONAL SYSTEMS AND THE EMERGENCE OF THE HEXAGRAM AND

OTHER SHAPES

Oftentimes it is unclear how a system will play out until a painting is complete. This leads to unpredictable consequences such as the emergence of shapes that group and/or regroup into larger shapes. The hexagonal based systems I use foster the emergence of a hexagram, otherwise known as the Star of David.

In the paintings *Octakiadecagon (Whole)* and *Octakiadecagon (Hole)(For Mom),* hexagrams are the result of the interaction of the system's layers. In both paintings, the system was devised with little concern for the look of the result of the final composition. As a result, there is a scale differential, involving at least three sizes of equilateral triangles. Because of the systems inherent symmetry, the triangles become evenly spaced around a hexagon, giving rise to the hexagram.

Many of my paintings feature regular, stackable shapes that can fill a plane. Beyond the predicable equilateral

triangles, squares and hexagons that are taught in basic geometry, the octakiadecagon is a regular shape that can tessellate infinitely. The octakiadecagon is made up of seven hexagons, six hexagons surrounding a central hexagon. This is more apparent in *Octakiadecagon (Hole)(For Mom)* than *Octakiadecagon (Whole)* due to the hexagonal hole in the center of the painting. The reason for the missing portion of the painting is to remove the center. The focus becomes the wall, normally hidden by a painting, but visible in *Octakiadecagon (Hole)(For Mom).* The central hexagon in the painting is a stabilizing point where the six other hexagons begin. Although the Star of David is displayed with vertical points, I have chosen to display the hexagrams with the points pointing horizontally to confound the religious signification.

CHAPTER VI

THIS IS THE END

Just like nature and life, my work is made up of many smaller parts working synergeticly in order to function properly. The systems I use are increasingly more complex, involving layers of interacting information competing for attention, giving rise to emergent qualities that could not exist without such interactions. Paraxial imaging and emergent shapes could not exist without the systems or the chromophobic choices.

My use of geometric systems, shapes and lines is a way I use to connect myself with my father and his practice. I try to use the most logical solutions to create an image, letting the system create its own final result.

REFERENCES

Greene, Brian. *The Hidden Reality: Parallel Universes and the Deep Laws of the Cosmos*. New York: Alfred A. Knopf, 2011. Print.

Lee, Pamela M.. *Chronophobia on Time in the Art of the 1960's*. Cambridge, Mass.: MIT Press, 2004. Print.

Riley, Bridget, and Robert Kudielka. *The Eye's Mind: Bridget Riley, Collected Critings 1965-2009*. Revised and extended 2nd ed. London: Ridinghouse in association with Thames & Hudson, 2009. Print.

Tyson, Neil deGrasse, and Donald Goldsmith. *Origins: Fourteen Billion Years of Cosmic Evolution*. New York: W.W. Norton & Co., 2004. Print.