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## HINTS OF WHOLENESS

Dylan Yvonne Welch

29 Pages

The fertile tension between what we know and don't know about the world is the mystery that invigorates our existence. I posit beauty is found in the knot of knowability and unknowability bound together in wholeness. In my work, I contemplate our unique receptivity to that underlying, invisible wholeness which makes its presence known through repeated structures in local nature and on a cosmic scale.

**KEYWORDS:** Printmaking, Nature, Art, Fine Art, Beauty, Digital Art, Quantum Physics

HINTS OF WHOLENESS

DYLAN YVONNE WELCH

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

MASTER OF FINE ARTS

School of Art

ILLINOIS STATE UNIVERSITY

2016

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HINTS OF WHOLENESS

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## ACKNOWLEDGMENTS

These three years have gone by too quickly no doubt because they were packed with joyful moments of learning and making. I am very grateful to all the guidance I received throughout the thesis process. Sarah, thank you for your calm care, insightful comments, and bursts of laughter. You lead by example, and the example you set is a life rich with love and high expectations for yourself and those around you. Vanessa, thanks to you for your confidence in me throughout the years and the wonderful art history classes, particularly Modern Architecture. Jim, your passion is palpable and your dedication to each student remarkable. Thank you for introducing me to the world of visual structure and pushing me to see how order can yield something altogether unexpected. I'm grateful to you, Morgan, for your constructive criticism and YouTube giggle breaks. Thank you, Greg, for simultaneously challenging and unequivocally supporting me with the poise of a Broadway actor. Finally, I gratefully acknowledge my curious and creative ancestors from whom I inherit a love for this planet and all others.

D. Y. W.

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## CHAPTER I: PERPETUAL MYSTERIES

I begin with curiosity regarding our place in the cosmos, thrown into relief by the extraordinary world of quantum physics. We participate in an intellectual cycle, moving from unknown toward knowledge then back to mystery. Humans build knowledge about local nature, gradually expanding the scope of inquiry outwards to the stars and inwards to the smallest particles. As we discover them, we immediately put principles of nature to work, naturally for our benefit. Inevitably however, the paradigm shifts, illuminating a new way of seeing the world and asking questions about it. Currently, we must reconcile the world we see, hear, and touch with the fundamental fluidity inferred from discoveries in quantum physics. For answers, we look back to nature which now presents a previously unseen face in response to a new way of asking questions. That is "... nature will respond in accordance with the theory with which it is approached."<sup>1</sup> Thus, I might follow a thread of inquiry in any direction for any distance and I would continue to generate new questions. Local nature as well as the broader cosmos boundlessly offer new avenues for our questioning and curiosity.

Now I turn the corner from curiosity to beauty. We question nature to gain knowledge, but this is not the whole story. We find in nature questions and answers, but also inspiration and beauty. What is it about nature we find so beautiful? So endlessly fruitful to human imagination? Biologist Edward O. Wilson posits that we are evolutionarily exceptional: "We alone among all species have grasped the reality of the living world, seen the beauty of nature and given value to the individual."<sup>2</sup> In other words, our improbable evolutionary path to consciousness uniquely positions us to appreciate beauty in the cosmos. What our appreciation for beauty and curiosity

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1. David Bohm, 6  
2. Edward O. Wilson, 132

about the world surrounding us implies is both obvious and mysterious: we are woven into the very fabric of the cosmos, integral parts of a latent, complex whole we can't see but sense exists.

This wholeness encompasses us and asserts itself throughout our scientific discoveries. Currently, quantum physics interprets an abiding wholeness via the wave-particle duality in which the observer and the observed are locked in a tight embrace, the one inextricably affecting the basic nature of the other.<sup>3</sup> Thus it is not a static wholeness, simply waiting to be uncovered by a brilliant individual. Rather it is, physicist David Bohm suggests, an “unending process of movement and unfoldment.”<sup>4</sup> Amazingly, this unfoldment occurs beneath our very gaze: the world around me is real and predictable, yet this tangible world appears to be built on the discontinuous movement and indeterminate states of subatomic particles. Why don't such astonishing revelations literally shake the very foundation of the earth? How does architecture still stand when we seem to know so little about what holds it up? The way we understand the world continues to shift, and each change reveals a different aspect of the underlying wholeness that gives substance to our world. We live with the mystery *that* the world works, even though we don't fully understand how or why.

The fertile tension between what we know and don't know about the world is the mystery that invigorates our existence. I posit beauty is found in the knot of knowability and unknowability bound together in wholeness. In my work, I contemplate our unique receptivity to that underlying, invisible wholeness which makes its presence known through repeated structures in local nature and on a cosmic scale.

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3. David Bohm, 9

4. David Bohm, *ix*

## CHAPTER II: SCIENCE, SEARCHING FOR WHOLENESS, FINDING BEAUTY

There is a side to nature that is presented to us, knowable, calculable, predictable. This is the side that science illuminates. Scientific method is capable of building incredible knowledge about the larger cosmos and our local nature by making observations to determine repeating patterns. I think of nature as the place from which we gather information about the larger cosmos and our place in it. Most scientific fields look to the tangible cosmos and gather incredible amounts of information to create models that accurately predict outcomes. Yet there dwells a mystery in nature's unknowable side. Indeed, the unknowable perpetually expands, parallel to science's expansion of the knowable. The inner, or dark, side is phenomenologically turned away from us and gives nature its enthralling quality: "That is, nature presents a face here, expresses an inner life, only because it is at the same time disclosed as being turned radically and ecstatically toward a distance unto which all the resonance of that life is directed, and from which that life is itself derived."<sup>5</sup> We infer beauty in nature not only from what we know about it, but also from what we don't know and can't see. We sense in local nature and the broader cosmos an order beyond our understanding, a life of its own.

Traditional cultures, religious mystics, and nature writers have long showed their attempts to access meaning through the mysterious beauty of nature: "Our life is a faint tracing on the surface of mystery, like the idle, curved tunnels of leaf miners on the face of a leaf. We must somehow take a wider view, look at the whole landscape, really see it, and describe what's going on here. Then we can at least wail the right question into the swaddling band of darkness, or, if it comes to that, choir the proper praise."<sup>6</sup> Here author Annie Dillard suggests our searching

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5. Bruce Foltz, *Noetics*, 47

6. Annie Dillard, 11

for meaning in nature is in fact at the heart of the search for meaning within ourselves. Moreover, since the intensive searching inherent in science *increases* our potential to see beauty in nature, it can be considered essentially devotional. Science is the incredibly focused observation of the mysteries of our universe that gives us a structure posing Dillard's "right question." After all, scientific research only continues to show us more and more about nature's mystery, underlying wholeness, and resulting beauty.

The pieces in my thesis show, *Trace Evidence*, borrow vocabulary from the language of science. These marks from science succinctly reference our uncertain place in the world. Dotted lines, geometric shapes, pencil lines, wave patterns of varying frequency and cosmic textures therefore serve as subject matter, placing the artwork in the world of nature's mysteries. However, these marks and shapes are not primarily referential. Most importantly, they constitute the vocabulary and syntax of the visual language I use. For example, the dotted line I use repeatedly functions in the same way diagrammatic marks do. The broken line creates a break between two elements, calling into question their distinction and implying a qualified relationship. Additionally, using the structure of geometric shapes and polyhedral nets allows the viewer to have fresh experiences of discovery, participating in the creation of wholes from distinct parts. Such visual discoveries require no scientific training and proceed analogously to scientific research and discovery.

### CHAPTER III: UNKNOWABILITY AND MULTI-STABILITY

Martin Heidegger says that “Beauty is the pure shining of the unconcealment of the whole, infinite relation, together with its center.”<sup>7</sup> I interpret this to mean that beauty is wholeness searched for in the relationship of individual elements. We are specially tuned to search for order and wholeness in nature. We do discover hints of wholeness, though we have never discovered one single and ultimate conclusion, nor, I believe, are we likely to. Thus, beauty in nature is a function of its knowability (it partially yields to our searching) *and* its unknowability (it never fully yields). Its parts may be detected and analyzed but it remains unpredictable as a whole.

Visual multi-stability provides a direct analogy to the uncertain and shifting relationship of parts to the whole, as opposed to a world in which each individual is impenetrably disconnected from all other individuals. Quantum physics suggests a fundamental connection between the observer and the observed, and many experiences in my life give this theory substance. The panel pieces express multi-stability through alignments of connected shapes across implied boundaries and the participation of individual elements in many potential groupings. As a result, they give expression to the unknowability of nature through analogy to undecidabilities in our visual perceptual system. Accessing an unsettled visual state indicates the other forces constantly at work which impede the conclusion of a fully predictable and knowable reality.

The panel pieces in *Trace Evidence*, the underlying geometric shapes establish a discrete structure whose rigidity is undermined even as it is given. I think of the underlying structure as

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7. Quoted in Bruce Foltz, *Noetics*, 36

an armature onto which I hang collaged, painted, and hand-drawn elements. I undermine the structure by allowing imagery, shapes, and lines to pass across the implied divide. Certain elements obey the axis of grid lines yet defy others. Points of contact visually drive these compositions; I am constantly asking what holds a collection of physically disparate forms together. By manipulating the ways that seemingly discrete elements move through spaces and are changed according to the forces they encounter on that journey (as visualized by an edge, negative space, point, or line), the arrangements are multi-stable. Spaces and shapes rearrange as you continue to look. In each grouping, elements are either physically connected to others or else there is an implied connection, creating a web of relationships in which individual elements have the potential to alternate, participating in multiple groups. In the potential for one thing to be many, I see the constantly shifting face of nature responding to our questioning gaze.

The gestalt principle of closure is another important element in these pieces: the delineations of the illusory volumes are implied only optically in the assumed continuation of edges, rather than by linear completion. That is to say, the form that binds the discrete pieces together occurs in the eye of the viewer, not on the page itself. Thus, it begins to speak to the creative work that eye and mind do together, making wholes from fragments, mass from void. In this way, I hope to provide hints towards a wholeness completed only in the eye and mind of the viewer. Searching for wholeness within the visual field is a search for beauty.

Each collaged and painted element clings to the underlying armature, only tenuously bound to the whole. There are many ways to interpret how and where the individual elements cohere. I use linear marks sparingly: small amounts of hand drawing in pen and pencil, or etched lines. These linear marks, in conjunction with the geometrical shapes, reference scientific method and the human impulse to question, analyze, and quantify. We see much of the world

through the abstractions and perspectives offered by science. Yet our knowledge of the world is not limited to the discrete systems science offers, but rather forms a larger, more mysterious whole that takes an elusory shape as we try to pin it down. This work attempts to analogize curiosity regarding our place in the cosmos: what we know, what we don't know, and how we find ourselves suspended between those possibilities.

## CHAPTER IV: RADICAL PARTICULARITY

The history of human thought illuminates routine paradigm shifts, evidence for nature's unknowability. This unknowability is also accessible it on a personal level. On a backpacking trip in California's Sierra Nevada, I felt the sun's hot glare cut through the chill breeze, unlocking the last patches of snow, drip by drip. That snowmelt nourishes an entire ecosystem as it tumbles down - evergreen trees, grasses, mosses, and tiny alpine flowers flourish in the water's wake, starting high up on a rocky ledge. (Fig. 1) With accuracy, we can predict where snowmelt will accumulate, and where an alpine meadow might be established based on the aspect of the slope, meteorological data and historical patterns of plant and animal reproduction. Yet this knowledge cannot pin down the narrative of the experience: there will always be different individual plants and animals emitting different sounds and smells each visit. Part of the beauty of this specific oasis, tucked humbly into the Crystal Range mountainside, at this precise moment, July 28th 2016, is what Bruce Foltz calls its *radical particularity*: this unfolding is precious because it will never recur in the same way.<sup>8</sup> In this way, the earth is resistant to "narrative or conceptual determination . . . thereby lending it an essential density - giving it an elemental opacity - and making possible its nurturing and supportive character."<sup>9</sup> In other words, nature is constantly replenishing, and from this springs part of its mystery and beauty.

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8. Bruce Foltz, *Noetics*, 133

9. Bruce Foltz, *Noetics*, 133





Fig. 1. An alpine meadow

I believe we will forever be unraveling the underlying structures that govern our world because they belong to an undiscoverable order. Take Foltz’s phenomenological example of an object in space: “even if we walk around the thing, say, a tree or a hill, it keeps one side turned away even as we try to see it from all sides. This is, of course, precisely what allows it to have an inside (...).”<sup>10</sup> There will always be a side to nature that is unknowable to us, a depth we will continue to plumb, which is the wellspring of our curiosity regarding nature and the heart of its beauty.

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10. Bruce Foltz, *Rethinking Nature*, 335

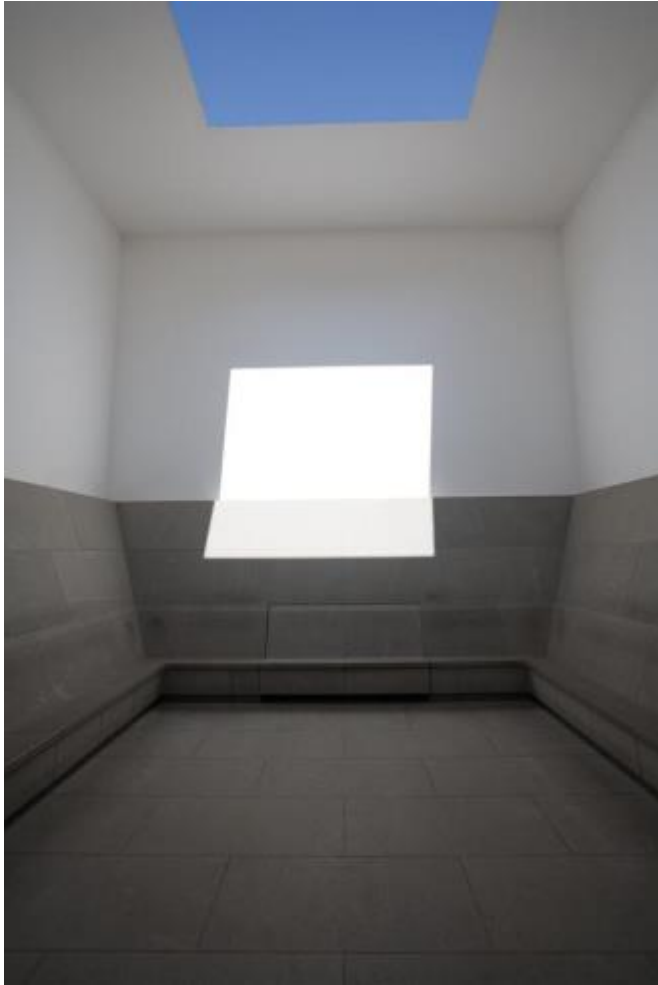


Fig. 2. James Turrell, *Tending (Blue)*, sculpture

While this quality in nature is inimitable, artists have long worked to capture the essence of that experience. Artist James Turrell draws from the wellspring of radical particularity to fill his work with wonder. His skyspace series consists of a “specifically proportioned chamber with an aperture in the ceiling open to the sky.”<sup>11</sup> The beauty of the skyspace is that Turrell doesn’t

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11. James Turrell, “James Turrell,” *Skyspaces*, 2016, <http://jamesturrell.com/work/type/skyspace/>.

intervene between viewer and sky. Instead, he simply and literally frames the sky, acting as a medium of nature. (Fig. 2) The sky reveals changing beauty with each moment of its radical particularity. His piece at the Walker Art Center in Minneapolis, Minnesota, is buried into the ground like a bunker in a green space outside the museum. As such it is surprisingly protected from the city sounds directly outside it. Benches line the four angled walls, with reclined back rests that promote a longer stay, with time to observe the changes above and around you. This piece strikes me as incredibly elegant: poeticizing the change of daylight and clouds, effectively sacralizing the passage of time for all to bear witness.



Fig. 3. Dylan Yvonne Welch, *Necker Space*, digital archival print

In my work, I attempt to access radical particularity through the creation of unsettled space. This relates to multi-stability described earlier, in that the visually shifting space leaves room for uncertainty as to the identity of the image. In *Necker Space*, I use the simple optical illusion of a regular pattern of rhombic planes to create a sense of a shifting space of cubes. (Fig. 3) Each plane groups in multiple combinations with adjacent planes, with the added complication of whether cube pushes outwards or recedes backwards in space. Thus, the viewing experience is active and unsettled. As in nature, where one sunset may look like another on the surface, small shifting details add that essential density that sustains our interest.

## CHAPTER V: THE PROJECTED SELF

My grandfather used to read to me from an old book of children's stories. On the inside cover was a simple line drawing of children starting up a winding path leading to a castle in the distance. Each time we opened the tome, I insisted on spending several minutes eagerly projecting myself into that imagined space, picturing myself walking up that meandering path. Gazing down on the earth from an airplane, you are treated to a similar kind of projection, this time a function of the shifted scale. From above, you are offered an expansive perspective, a larger context through which to interpret your scale and the scope of your existence. Individual people are no longer distinguishable yet there is unity to all you see: the wind shapes the clouds into tufts, together with the clouds, the sun casts shadows onto water that reflects the expanse of sky. (Fig. 4) You are in two places at once, looking down at the land and oceans while simultaneously holding in your mind the experience of being down there, on the earth. The self-similarity we discover in nature, structures repeating at the smallest and largest scales, is also function of our ability to project ourselves across scales. Poring over illustrations in a book, squinting through a magnifying glass, or peering into a telescope (only to discover that what we see in a microscope and telescope look very similar), we are capable of being present in time and space while simultaneously projecting our minds elsewhere. Such feats of imagination are precious reminders of the special kind of awareness we inherit from our unlikely journey through evolution.



Fig. 4. Aerial view of Earth

We use this remarkable ability so much it becomes commonplace; however, art and architecture, specifically sacred architectural spaces, give me fresh ways to project myself into realms I can only imagine. During recent travels, I spent many hours sitting in the inner courtyard of the Sultan Ahmed mosque in Istanbul, Turkey. (Fig. 5) The inner courtyard is set apart from the major streets just outside it by large gardens that surround the main building. I happened to be traveling during the holy month of Ramadan and, in the evenings, these green spaces were teeming with families preparing picnics to break the daylong fast at nightfall. You enter the gardens through one of several gateways, then emerge in the inner courtyard via one of three marble archways. People moving through the arcades make themselves comfortable in all spaces. Children scamper around the marble inner square, tourists snap photographs, and many

people simply sit in the shade. If you choose to sit down and look around, you gaze upon the humped domes, arched doorways, and latticed minarets culminating in gold antennae that reach skywards. A view of the mosque's plan reveals that three half-domes wrap around each of four quarter-spherical domes which in turn surround the largest, central most elevated hemispherical dome. Each level is stepped, terminating in a large dome, so that, from the ground, one can look up the slope to see the topmost features. The overlapping, world-like domes, strong symmetries, and separate but connected spaces echo orders we recognize in nature and cosmos. Thus, I become an interpreter of cosmological meaning, linking the architectural domes to the dome of the sky and feeling my body as the site of connection between the earth under my feet and the heavens implied by the tiled domes high above. (Fig. 6) A whole world is represented on a smaller scale. As large as it is, the architecture is closer to my scale than the unimaginable expanse of the broader cosmos. In other words, I begin to perceive the architecture as a microcosm bringing the complex overlapping relationships that I find in the world closer to me.



Fig. 5. Inner courtyard of Sultan Ahmed Mosque in Istanbul, Turkey



Fig. 6. View inside Sultan Ahmed mosque



## CHAPTER VI: INTERIOR, EXTERIOR

The relationship between interior and exterior is quite complex in the Sultan Ahmed mosque. Entering the courtyard from the street, there is an immediate quieting of city noise due to a separating wall. This space is set apart, but you are still under the open sky, among grass and trees, and still you face weathered exterior walls. This constitutes the first level of transition between inside and outside. You then pass into the second courtyard, doubly walled off from the streets, still subject to wind, rain and sun. This space, however, feels like a sanctuary. While it buzzes with human activity, exquisite architecture surrounds you, from the hewn marble flagstones, up as high as you can see to the top of the mosque. Furthermore, no other buildings are visible from this courtyard, lending a strong sense of separation. (Fig. 5) Finally, you enter the mosque space where ceilings provide shelter from the elements. Paradoxically, this three-fold interior space opens outwards: decorated tiling adorns the walls and ceilings right up to the highest dome, which appears quite far away. As mentioned previously, this space functions as a microcosm, and the domes high above act as a sort of sky. Since we cannot fathom the vastness of the cosmos, the enclosure of a vast yet finite space which mimics world-like structures makes the unimaginable concept of a cosmos more accessible. (Fig. 6)

Through the architecture, Sultan Ahmed mosque therefore poses a question quantum physics also raises: where do my inner consciousness and the outer world meet? To question the boundaries of inner versus outer is also to ask what distinguishes each one of us from another. Is the substance of my body separate from what lies around me? In biology, individuals are understood to have “three-dimensional spatial boundaries, endure for some period of time, are

composed of physical matter, bear properties, and participate in processes and events.”<sup>12</sup> In my daily life, I have a clear sense of individuality, manifested in my routines, ailments, personality, etc.... From this biological perspective, it is easy to see myself as a separate object, in a world of other objects, yet I am deeply affected by the weather, an angry person in the room, smells in the air. Thus if I listen closely, even daily experiences begin to whisper that the whole truth of my self is not so easily cut off from everything around me. Bohm sees it this way: “... one can no longer maintain the division between the observer and observed (which is implicit in the atomistic view that regards each of these as separate aggregates of atoms). Rather, both observer and observed are merging and interpenetrating aspects of one whole reality, which is indivisible and unanalyzable.”<sup>13</sup>

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12. Robert A. Wilson and Matthew Barker. "The Biological Notion of the Individual", *The Stanford Encyclopedia of Philosophy* (Summer 2015 Edition), Edward N. Zalta (ed.), 22 October 2016, <<http://plato.stanford.edu/archives/sum2015/entries/biology-individual/>>.

13. David Bohm, 9



Fig. 7. Dylan Yvonne Welch, *Circle Space*, digital archival print

*Circle Space* questions the relationship of self to non-self by referencing the interiority of architectural space intertwined with exterior space. The print consists of many circles that overlap to imply a building-like space topped with domes, yet inside connects with outside in many ways. (Fig. 7) Firstly, the cosmic subject matter that sits at the top of the page, where one might expect the sky to be, bleeds into, even forms the ovular shape that is within the major dome. It is furthermore repeated in the center of the image, where the two larger ellipses overlap with the parallelogram plane that bisects all the circles, as though the heart of the space opens skywards. The starry vocabulary is also found through the window-like openings in the top left as well as in the overlapping circles on the bottom of the image. Here, the sky both seeps out of

and peeks into the inner space. There is a sense of dimension and depth, particularly in the meeting of three planes in the bottom third as well as in the implied parallelogram, the space is never only illusionistic. Rather the illusion breaks down constantly, flattening itself out to reveal the constituent geometric elements. The circular form of gradient blue reads strongly as a sky-space, which could make that circle symbolic of a world, yet while the top half of this microcosm is bounded, the bottom half is broken up, inviting all the other elements below to be a part of that world.

The purple pillars consist of circular bands of color that become more intense towards the center versus more gray in the shift away from the center. These bands create visual contrast, proposing an aerial view as opposed to the frontally accessed, perspectival space in the central blue arc. The hypnotic striations are echoed in the center shape, allowing the texture to sit behind the black element, only to push to the fore in the center. This helps complicate the space, which may be seen alternately as flat geometric planes on the surface and as faces of cubic volume in illusory space. The echoing of three circles, one large and blue in the center flanked by two smaller circles defined by the areas of more intense purple perpetuates an architectural interpretation of the overall shape of the piece. Indeed, it recalls the bilateral symmetry found in Orthodox churches. Yet it still can't be considered a discrete object as the striations of the bands of color are continuous and the tower on the left-hand side disrupts the symmetry. Thus, through these formal means, I try to simultaneously describe an enclosed architectural space and the unbounded cosmic space to which our imaginations give us access.

The splattered, starry texture alludes to cosmic subject, but the topographic texture, a leitmotif in this exhibition, suggests a terrestrial subject. Especially set against the velvety, cinematic black of the lower right hand side, the smaller half-circle looks like a photograph of

the moon. Additionally, it is bound on the other side by the almost cliché gradient blue, another celestial allusion that helps situate the image at the intersection of possible and impossible spaces. You might be inside this space, but you might equally be light-years away from it. This image invites the viewer to project themselves into a mysterious and impossible space, wherein interior and exterior are permeable.

The striated red and orange area constituting one third of the central almond shape is created by overlapping ellipses and is rotationally symmetrical to its blue partner above. The splattered, cosmic dots that connect the two elements function here as the microcosmic and macrocosmic texture which constitutes the biggest stars and the smallest dust particles. Dillard says that “The texture of the world, its filigree and scrollwork, means that there is the possibility for beauty here, a beauty inexhaustible in its complexity, which opens to my knock, which answers in me a call I do not remember calling, and which trains me to the wild and extravagant nature of the spirit I seek.”<sup>14</sup> Texture in nature draws us in and begs us to exercise our curiosity. In the center shape, therefore, the elements function broadly as earth and sky, connected by the cosmic texture whose specific scale isn’t immediately discernable and which catches our eye.

The constantly shifting visual landscape described above begins to reference unknowability in nature. As previously discussed, nature’s knowability is pushed up against its eternal *unknowability*, just as the physical reality of a work of two-dimensional visual art exists as a material object, but the illusion of depth and multiple perceptual groupings simultaneously point to curious holes in our perceptual system. Similarly, discoveries in quantum physics make us question the basic nature of matter, yet we continue to live in a solid, largely predictable world.

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14. Annie Dillard, 141

## CHAPTER VII: DIGITAL PRINTING AND THE BOUNDARIES OF IMAGINATION

While I remember the days before digital technology, my adult life has been shaped by its pervasive influence. I clearly remember the first time I was fooled by Photoshop: a person I knew was pictured jumping an incredible height for a Frisbee. I was awed by his physical abilities until somebody told me, laughingly, that this was “Photoshopped.” Certainly, there is much to be said about the socio-political implications of digital manipulation, but in my work, I use digital image editing in the same way I use diagrammatic shapes and dotted lines: to playfully explore the limits of what is known through science, what we can imagine and visualize, and what takes imagination to new limits.



Fig. 8. M.C. Escher, *Cycle*, lithograph

I am certainly not the first or only artist to question the boundaries of our imagination through a playful exploration of visual perception. While artist M.C. Escher did not use digital tools, his work stands out as an important influence on my work. In his 1938 lithograph *Cycle*, Escher uses his mastery of illusion and geometry to create a world that simultaneously makes sense and no sense whatsoever. (Fig. 8) There is clear subject matter in this piece: a human figure moves down the staircase of a building that has a pleasant view of a river valley beyond. However, as the figure descends, he becomes more and more embedded into the visual material of the house. This material, the Necker cube pattern, participates in all aspects of the architecture, as stairs, tiling and structure. Escher cleverly transforms the figure into the cubic pattern through the tessellation pattern that slowly changes from organic, asymmetrical form to rhombic regularity. While the sense of illusory space is very strong, all elements are laid out to see: the transition from human to cube is accomplished gradually, so you can see the steps. The magic of the piece is that you simultaneously see the illusion and the tools that create the illusion for you.

Additionally, he includes idiosyncratic elements like the flowering plant, the landscape in the background, the slight hump on the archway, and three different window treatments. These small touches help to place the piece within our world, so that the skewing and illusions have a stronger impact. Furthermore, thanks to the three values, as the asymmetrical tessellations begin to become more regular they give a sense of aerial space. The white shapes look like clouds casting black shadows onto the middle gray ground. Once the tessellation achieves geometric regularity, it exhibits the familiar illusory play of the Necker cube: does the shape project out into space or recede backwards, away from the viewer? Thus, every element is packed with multi-stability. In the relationship of visual sense to nonsense that the artist pulls from a rigid

structure, Escher's piece speaks to the way relativity physics challenges, yet coexists with, the previously dominant mechanistic worldview.

In most of my recent work, I utilize the readability of geometry and symmetry to acknowledge that there is an underlying wholeness in nature. In the digitized etchings, I create modular elements using traditional etching processes, then work digitally to construct the form by pushing and pulling the image with editing tools. It remains very important that each digitally manipulated piece still incorporates the marks and textures of hand-pulled prints. This work ultimately speaks to the varying ways we take in and then project our perspective of the world and our place in it.

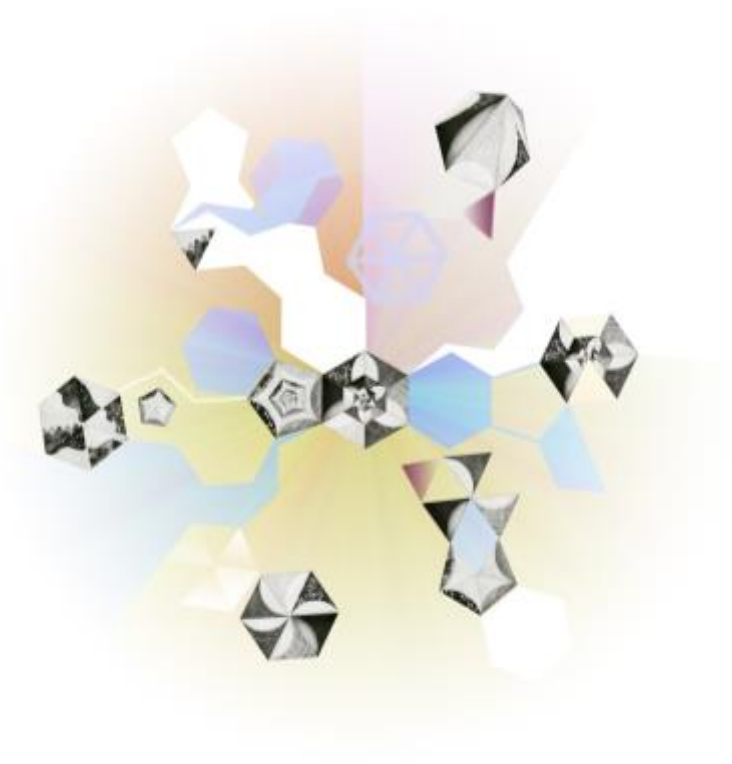


Fig. 9. Dylan Yvonne Welch, *Bucky Ball Net*, digital archival print



In the geometric net series, specifically *Bucky Ball Net*, the airbrushed color and small-scale detail play a significant role in the content. (Fig. 9) Digital technologies allow us to look deep into the world to reach new conclusions about what goes on at levels that are invisible to the naked eye. The world I want to represent in my images is both a rectilinear and rational world, because such a world does map onto our experience, and one that also includes the wondrous possibilities that quantum science offers. In this series, I start with a similar approach as in the panel pieces, creating a geometric armature that I then expose and confound. In this case, the underlying structure consists of polyhedron nets, the unfolded visualization of a polyhedron. It is a connected group of polygons that follows specific order and offers the possibility for interplay between figure and ground. Most marks define both figure and ground, and the color shifts from void to mass in various places. Again, I start in a heavily structured world, then I use color, marks of varying qualities and textural subject matter as tools to simultaneously illuminate and obscure the structure. The level of detail in the scanned etchings works in this dual way. The shapes fit into the regular polygons (triangle, pentagon, hexagon) of the nets, but their high level of textural detail and self-similarity commands significant attention, asserting their sense of completion, and undermining the wholeness of the net.

Furthermore, the constituent triangles are discretely constructed: they are etched and printed separately, then scanned and reconstructed in the digital drawing separately, distinguishing them by bevel, plate tone, and digitally cut edge. However, the subject matter and negative space within the pieces imply a connection between the physically separate pieces. For example, the equilateral triangles that constitute the hexagon at the center of *Bucky Ball Net* contain elliptical forms that combine with another triangle to create the full elliptical form. The purpose of all this visual play is to create a sense of worlds within overlapping worlds. I want the

viewer to feel an uneasy sense of balance, which is also reflected in the complementary color choice. Two major pairings of colors exist in *Bucky Ball Net*, blue/orange and yellow/violet, to give an overall harmonious structure. They are furthermore smoothly applied with the delicacy afforded by the airbrush of the digital inkjet printer. Yet minor clashes occur where primary meets primary and secondary meets secondary. I hope this color play functions like an unanticipated minor key in music: a surprise that leaves room for questioning the overall structure and timbre of the piece.

## CHAPTER VIII: CONCLUSIONS

In a world shaped by what we know from science and what we can do with technology, we perpetually confront questions beyond our powers to fully understand. We remain in a cycle of intellectual life, continuously formulating questions and finding answers even as we are confronted with new questions. Scientists continue to discover smaller and smaller particles constituting the material world. This constant telescoping seems to me analogous to our search for meaning, which similarly reaches no end. We are well-disposed to explore order in the cosmos, yet there always remain more horizons to explore. Theoretical physicist David Bohm suggests there is “no reason to suppose that there is or will be a final form of insight (corresponding to absolute truth) or even a steady series of approximations to this. Rather, in the nature of the case, one may expect the unending development of new forms of insight.”<sup>15</sup> In the body of work on display in *Trace Evidence*, I attempt to approach the unending quality of nature by tinkering lovingly with structure, dismantling it with all the tools of visual perception I have. The resulting pieces speak to me of the emergent quality of order in nature, offering hints of wholeness.

It is easy to view our influence on the local biological environment as toxic and destructive. Biologist Edward O. Wilson diplomatically assesses our place on Earth: “Exalted we are, risen to be the mind of the biosphere without a doubt, our spirits are uniquely capable of awe and ever more breathtaking leaps of imagination. But we are still part of Earth’s fauna and flora, bound to it by emotion, physiology, and, not least, deep history.”<sup>16</sup> Finding myself in the midst of global ecological crisis, I must bear deep concern for the future health of all life on earth. It is

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15. David Bohm, 5

16. Edward O. Wilson, 25-26

impossible to deny that human consumption delivers blow after blow to the earth, our home. Some solutions seem clear: green energy, sustainable food systems, economic and social justice are among many important causes that mitigate our destructive impact on local nature as well as on ourselves. But what role do I play as an artist? Foltz and others argue that our environmental crisis is at least in part a spiritual one, and call for beauty to be upheld as a guiding principle. Who, with their eyes and hearts open, could possibly deny something majestic at work here or our mysterious place as a part of it? We are uniquely placed to witness and appreciate beauty in nature. Contemplating beauty in nature and describing it using all our varied creative languages may be one of our highest callings.

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