ART-BASED PERCEPTUAL ECOLOGY AS A WAY OF KNOWING THE LANGUAGE OF PLACE

By

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ABSTRACT

This arts-based autoethnographic study describes the practices of Art-Based Perceptual Ecology as a way of knowing the language of place. The research is grounded in a desire to find ways that people can come to know about the natural world which do not rely on the dominant Western scientific paradigm of logic and reason. I propose that practicing Art-Based Perceptual Ecology in landscapes supports art as a way of knowing landscapes. Further, I believe that making images through Art-Based Perceptual Ecology practices brings one to an awareness of the ecological patterns found at multiple scales in the landscape. The land's patterns are the configuration of ordered relationships found in a particular system. These patterns, when revealed, yield the language of place or stories in the land and lead one to the inherent wisdom found in the natural world.

In this study, I recognize a relationship among key concepts that arise from the practice of Art-Based Perceptual Ecology integral to revealing and interpreting patterns in the landscape. These concepts are: direct experience in the natural world, magic, intuition, imagination, and the practice of Art-Based Perceptual Ecology. In this study, the researcher and co-participants will explore the questions: How is the practice of Art-Based Perceptual Ecology a way of knowing the language of place? How does the image created in Art-Based Perceptual Ecology reveal the land's stories and lead one to clues of the evolutionary history of the land? And, are the patterns discovered in the images meaningful to gaining a deeper understanding of a place?

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CHAPTER 1

Introduction

My work is grounded in a desire to find ways that people can come to know about the natural world that do not rely on the dominant Western scientific paradigm of logic and reason. I suggest that practicing Art-Based Perceptual Ecology supports art as a way of knowing as well as other divergent ways of knowing landscapes, intuitive, emotive, and embodied. This practice can provide unique opportunities for people to gain a profound understanding of the natural world that does not rely on logic and reason.

I have developed and put a name to these intentional methods of art making: Art-Based Perceptual Ecology (ABPE).[1] In the term, ABPE, all words are given equal weight. Art-based recognizes that the art making provides frames of reference and context to our sensory experience in landscape.[2] Ecological perception recognizes it is the body that is the location of the connection between self and the landscape.[3] Ecology gives us a way to think about what our senses apprehend in this place.[4] The land's patterns are the configuration of ordered relationships found in a particular system. When practicing ABPE, the layers and levels of the landscape rise to the surface of our awareness. Practicing ABPE reveals patterns in the landscape. The images created in this practice

1 Woolery, LA. 1999

2 Ibid

3 Gibson, J. 1966

4 Thomashow, M. 2002

offer a view of the system at multiple scales and provide a tangible means of knowing the networks of relationships found in this ecological system.

In the ABPE practice, the job of the image is to fix the place in time and space. The image is the container--it holds the space. The image represents one moment in the evolutional history of the land, representing time frozen on the journal page. The image created in the ABPE practice becomes a graphic record of the intelligence of one's body in relationship to place, embodiment of the knowledge held within this one landscape. Knowledge held within landscapes can be understood by considering biology, which is the science of life and living organisms. Biology defines the life process of organisms as it involves growth about a point in space. If we recognize a point is a record of, or the static result of dynamic equilibrium, then we know multiple points become patterns. Patterns are the tangible record of interactions between and amongst organisms in the landscape.[5] Making images through ABPE practices brings one to an awareness of the patterns found at multiple scales in the landscape. The land's patterns, when revealed, yield the language of place or stories in the land. Ability to read the patterns provides one with clues to the evolutionary history of the landscape.

The primary focus of this arts-based autoethnographic research is to investigate my experience and the experience of others when practicing ABPE in the landscape as an adult. In arts-based autoethnographic methodology the researcher is the subject bringing the first-person voice into the research by gazing inward at one's own story while

5 Allen, T. & T. Hoekstra, 1992; Vernadsky, V. 1998

simultaneously looking outward at a world beyond, a combination of ethnography and autobiographical intentions.[6] My research goal was to understand how ABPE practices bring one to an awareness of patterns in the landscape; how the land's patterns, known as the codes of the land's communication system, when revealed, yield the language of place; and how knowing the language of place leads one to clues that tell the evolutionary history of the land, thus creating a deeper understanding of the land's stories.

Review of the Literature

Throughout this process I have come to recognize fundamental concepts integral to revealing and recognizing patterns in the land. In the literature review, I will explore the concepts key to ABPE which are: inherent wisdom in the natural world, direct experience in landscapes, magic, intuition, imagination, art making, patterns in the landscape, and ways of knowing. This literature review summarizes the key authors and ideas that have shaped my understanding of each of the concepts.

Inherent wisdom in the natural world

I write from the premise that wisdom is inherent in the natural world. Historically, recognition of the land's wisdom is evident in the stories, ceremonies, and art of most ancient cultures.[7] Passed on by the elders of the community, mythic stories and place

6 Ellis, C & A. Bochner, 2000; McNiff, S. 1986

7 Tallmadge, 1990; Townsend, R. 1992

stories remain embedded in cultures.[8] A whole genre of contemporary literature categorized as place-based knowledge and stories-in-the-land continues to recognize the inherent wisdom in the land[9] and follows on the heels of seminal nature writers such as Thoreau and Leopold.

From a biological framework, place, or specifically landscapes are the "spatial matrix in which organisms, populations, ecosystems and the like are set".[10] In the biological sciences, nature's wisdom is referred to as knowledge. The Santiago theory of cognition (or the process of knowing) suggests that every living organism within an ecosystem holds within that organism the knowledge of its origin and its relationship with that system.[11]

An ecologist understands the land's communication system as a reflection of environmental change. Patterns in the landscape are expressions of the land's communication system. Interpreting the pattern language allows one to know the land's stories, which lead to clues that tell the evolutionary history of the landscape.

An artist understands this communication system, as art making touches a preverbal, unconscious level, creating connections to worlds unavailable to sight alone. Congruent with ancient practices of communication such as the cave paintings of Lascaux,

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8 Feld S. and K. Basso, 1996; Nabhan, G. 1997; Shepard, P. 1978

9 Elder, J. 1998; Feld S. and K. Basso, 1996; Nabhan, G. 1997; Pyle, R. 1986; Thomashow, M. 2002; Zwinger, A. 1989

10 Allen, T. and T. Hoekstra, 1992, p.56

11 Maturana, H. & V. Varela, 1980. Living organisms have sense perception, experiencing sensation of feeling. According to the Santiago theory developed by Maturana and Varela, the simplest organisms are capable of perception and thus cognition. Thus the sentient landscape refers to the land having the ability to perceive changes in its environment. As an example of this, bacteria "...sense chemical differences in their surroundings and, accordingly, swim toward sugar and away from acid; they sense and avoid heat, move away from light or toward it, some bacteria can even detect magnetic fields"(Margulis, L. and D. Sagan 1995, p. 179).

artists often feel when making art they create an intimate connection with a world superior to ordinary experience.[12] The word magic may describe the artist's experience of alternative realities.

Direct experience

Direct experience is the recognition of the body as the connection between self and world. Many indigenous peoples experience being shaped by the animate landscape through direct experience in the natural world.[13] "What we have inside us is, ultimately, always of the larger, wilder world. Nature is not just 'out there,' beyond the individual."[14]

Edmund Husserl introduced the concept of phenomenology, the philosophical study of direct experience. This subjective view of reality questioned the scientific assumption of an objective reality. Husserl described phenomenology as "the world as it is experienced in its felt immediacy."[15] Recognizing the human species as an active participant in this exchange, Merleau-Ponty moved beyond Husserl's solipsistic experiencing of the world and defined the corporeal body as the experiencing self within a world of other active experiencing bodies. [16] Abram describes the reciprocal dimension in this way:

> As we return to our senses, we gradually discover our sensory perceptions to be simply our part of a vast, interpenetrating webwork of perceptions and sensations

12 Dissanayake, E. 1991

13 Abram, D. 1996; Feld, S. and K. Basso, 1996; Levy-Bruhl, L. 1985; Nabhan, G. 1997; Shepard, P. 1996, 1982, 1978

14 Nabhan, G. 1997, p.11

15 cited in Abram, D. 1996, p.35

16 Merleau-Ponty, 1962

> borne by countless other bodies—supported, that is, not just by ourselves, but by icy streams tumbling down granitic slopes, by owl wings and lichens, and by unseen, imperturbable wind.[17]

In modern science, physics recognizes that all knowing is a participation of the subject in the object.[18] Observing young children at play may give us the most dramatic understanding of the participatory relationship needed to 'know' nature, as the child's means of building knowledge is, "knowing by becoming" through "direct organic participation of the perceiving nervous system in systems of nature."[19] Direct experience in landscapes is important to my work, as ABPE recognizes that self and world shape one another through a reciprocal relationship, with the body as the connection.

Magic

My work is grounded in an understanding that all cannot be known through the scientific paradigm of logic and reason. Therefore, magic is important to my thesis as ABPE recognizes there are alternative realities available to us that cannot be defined through our culture's language. Most, if not all aboriginal societies acknowledged the existence of two "parallel worlds"—the ordinary experience of daily life and the other world of extraordinary experience or a supramundane world.[20] Outside of the Western culture, the magician understands the existence of two worlds, as the position of magician

17 Abram, D. 1996, p.65
18 Sloan, D. 1993
19 Cobb, E. 1977, p. 33
20 Dissanayake, E. 1995

or shaman is often delegated to one who lives at the edge of the culture and who is the intermediary between human and nonhuman worlds.[21]

The Aztec word *teotl* refers to the life force inherent in greater or lesser measure in minerals, plants, animals, and human beings, and describes all things as intensely and naturally alive.[22] *Teotl* is a way of identifying magic, thus acknowledging that alternative realities are present and felt. The concept of magic does not fit neatly in the paradigm of Western science. It is compounded by the fact that *teotl* is not easily described by the culture's language.

Believing in the mystical experience as a psychological reality, an alternative mode of consciousness,[23] many important scholars have acknowledged that alternative realities exist. In this magical dimension, as it is sometimes called, one can visit the past or the future with the limitations of our cultural conditioning laid aside. Today in Western culture, magic may be most readily understood by observing young children at play. In early childhood there has been limited exposure to the language, social customs, and taboos of the culture, creating an innocence, which allows the child to freely explore alternative realities. The perceptual logic of a culture and the controlling mind prohibit most adults from entering this magical dimension unless they choose the work of the poet, the artist, or the creative thinker.[24]

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21 Abram, D. 1996

22 Townsend, R. 1992

23 Gablik, S. 1991; Prinzhorn, 1972

24 Cobb, E. 1977

Accessibility to multiple dimensions in landscapes is of great relevance to the ecologist as understanding and awareness of perceptual scale is necessary in order to study global environmental change. By shifting one's perspective, thus expanding the Umwelt,[25] one can explore temporal and spatial scales inhabited by other organisms and overlooked by most humans.[26] This exercise may be very similar to how the magician alters the common organization of her senses in order to enter parallel worlds. Magic is important to my work, as ABPE acknowledges that alternative realities exist, invisible worlds, parallel worlds unavailable by sight alone and further recognizes, historically, alternative realities have been known through methods other than logic and reason. Common to the experience of both the ecologist and the artist is intuition and imagination. Following is a more detailed account of those elements.

Intuition

In my work, intuition is important as it is an internal knowing of that which is not evident. Polanyi[27] states that, while explicit knowing is that which is visible and can be described, tacit knowing opens one to know more than one can tell, a knowledge that cannot necessarily be put into words. "The bridge between the explicit and the tacit is the realm of the between, or the intuitive."[28]

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25 Uexkull, J. von, 1909. The word Umwelt (environment) was used for the first time by Uexkull. Umwelt refers to the physiological perceptual environment of any organism which is determined by how it responds to its environment.

26 Thomashow, M. 2002

26 Polanyi, M. 1983

28 Moustakas, C. 1990, p.23

Webster's Dictionary defines intuition as "a sense of something not evident or deducible; an impression." Trusting in her intuition is what allowed genetic scientist Barbara McClintock to see deep into the mysteries of maize genetics. "Over and over again, she tells us one must have the time to look, the patience to 'hear what the material has to say to you,' the openness to 'let it come to you.' Above all, one must have a 'feeling for the organism.'"[29] McClintock's intuition could be considered an internal "felt" sense of what she inherently knew—a sense impression experienced in her body.

Intuition is integral to ABPE as it is an internal knowing of that which is invisible (magic), creating a bridge between the external world of what one can touch (direct experience in landscapes) and the internal world of the sensing body. In my work, I consider intuition to be a type of "seeing through sensing"[30] which in turn stimulates the organizing process, imagination.[31]

Imagination

Imagination is important to my thesis as ABPE recognizes that imagination gives shape and form to the unknown, allowing one to test what one feels (intuition) but cannot see (magic). The imagination is a means of forming images in the mind.[32] Developmentally, the imagery processing system precedes the language system.[33] Corbin

29 Fox Keller, E. 1983, p.198
30 Woolery, L.A. 1999
31 Cobb, E, 1977
32 Warnock, M. 1976
33 Virshup, E. & B. Virshup, 1980

suggests imagination is an "intermediate universe between, on the one hand, the universe of sensory data and the concepts that express their empirically verifiable laws, and, on the other hand, a spiritual universe."[34] And it is the image-making power "by which, as far as we can, we 'see into the life of things.'"[35] Imagination is a constructive process, more flexible and creative in contrast to true sensory or perceptual images.[36]

Shifting one's perspective allows one to explore a spatial dimension to landscapes. Coupling imagination with that experience can yield a temporal exploration to landscapes as well.[37] The temporal could be considered that which is not immediately present as it is elusive and difficult to frame. In landscape ecology, a rich imagination offers a means of temporal speculation, a heightened awareness of the way things must have been and how things might be in the future of a landscape.[38] For the ecologists, the ability to explore multiple scales in the landscape is imperative to their research on issues pertinent to ecological sustainability.

ABPE recognizes that imagination has application as a modeling device, allowing one to test the possibilities, to give shape and form to what one feels (intuition), what one can touch (direct experience in landscapes) and to what one cannot see (magic).

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34 Corbin, H. 1969, p.181

35 Warnock, M. 1976, p. 194

36 Singer, J. 1980

37 Fortey, R. 1997; Margulis, L. 1995; Volk, T. 1995; Thomashow, M. 2000; Uexkull, J. von. 1959

38 Thomashow, M. 2002

Art Making

The art making process is essential to my work, as ABPE recognizes that this process touches a preverbal, unconscious level, connecting one to worlds unavailable to sight alone. The sacred qualities of landscapes, as well as the interactions between humans and their environment, are heightened and remembered through symbolic art forms.[39] Historically, one example is the art found in the caves at Lascaux.

> Both artist and perceiver often feel that in art they have an intimate connection with a world that is different from if not superior to ordinary experience, whether they choose to call it imagination, intuition, fantasy, irrationality, illusion, make-believe, the ideal, dream, a sacred realm, the supernatural, the unconscious, or some other name.[40]

In hunter-gatherer societies the arts codified one's experience, acted as a language translator, and made possible the information exchange necessary for survival.[41] Art making as an intermediary moves one across boundaries, "boundaries between experience and representation, the temporal boundaries between past and present, and the cultural boundaries between individual and humankind."[42]

Art forms, such as dance and music began as an activity derived from the rhythmic imitation of animals, of flowing waters and birdsong.[43] Congruent with history, many contemporary artists see art as an expression of the experience of "being" in the world. In the gestalt art experience, the image or marks drawn on the page represent the artist

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39 Gardner, H. 1994; Shepard, P. 1996

40 Dissanayake, E. 1988, p.95

41 Biesele, 1983; Dissanayake, E. 1992; Liebenberg, L. 1990

42 Davis, J. and Lawrence-Lightfoot, S. 1997

43 Feld, S. and Basso, K. 1996; Nabhan, G. 1997; Shepard, P. 1978

actively living through an event, the graphic record of the intelligence of the body in relationship to place or phenomenon.[44] Artist Hannah Hinchman suggests the very act of making art, specifically drawing, is a tactile event, a complete body experience, "you feel the shapes inside your body, and your body wields the tools that capture the shapes."[45]

In the world of science, before photography, scientists/artists such as Goethe (1749-1832), Darwin (1809-1882) and Haeckel (1834-1919) relied heavily on visual communication to explain their discoveries.[46] Their drawings and illustrations were guided by intentional questions: What do you look like? What are you made of? Intentionality is a willingness to be a full participant in the process of knowing, recognition that self and world are inconceivable without the other.[47]

> I am convinced that their scientific drawings and paintings were very often 'precognitive' pictures rather than illustrations—the actual scientific research process took place during and through the picture making. For these scientists, the pictorial process was a way of achieving knowledge.[48]

Images are a universal phenomenon that everyone experiences in different venues, through dreams, the mind's eye, reverie, and imagination.[49] Art making is the process of giving images form, the image being the art product.[50] The arts are a means of expression and communication, a symbol language. Ricoeur[51] tells us metaphor is a "figure of

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44 Rhyne, J. 1984

45 Hinchman, H. 1999, p. 54

46 Hesse-Honegger, C. 2001; Seamon, D. and A. Zajonc, 1998

47 Sloan, D. 1993

48 Hesse-Honegger, C. 2001, p.7

49 Allen, P. 1995; Bachelard, G. 1983

50 Allen, P. 1995

51 Ricoeur, P. 1984, p.

discourse." "Metaphor takes the seemingly unrelated and possibly 'incompatible' phenomena and produces a new semantic relationship through their juxtaposition."[52] Images, also known as transitional objects,[53] like metaphor, cross the boundaries of the normal and everyday use of language.[54] The arts support the construction of new knowledge, as art; in the same way metaphor provides a breakthrough into a dimension of intelligibility previously inaccessible.[55]

The image as art product is important to my work, because ABPE recognizes the image as a symbol or transitional object representing the language of what one feels (intuition), with what one can touch (direct experience in landscapes), with what one cannot see (magic), producing a new semantic representation through their juxtaposition. And further, ABPE recognizes art as a language within itself, which "speaks an idiom that conveys what cannot be said in another language and yet remains the same."[56]

Patterns In the Landscape

The ABPE practice recognizes patterns, which are found in landscapes at multiple scales as the code of the land's communication system. These patterns yield the narratives of place, providing clues to the evolutionary history of the land.

52 Gallas, K. 1994, p.100
53 Beres, D. 1965
54 Gallas, K. 1994
55 Sloan, D. 1993
56 Dewey, J. 1980, p.106

From an ecological model, patterns are clues or indicators of the land in flux, movement of energy systems found at multiple scales. Allen and Hoekstra describe scale-independent patterns found in the landscape as meanders, spirals, explosions, and branching systems.[57] Patterns visible to the unaided eye are the organism's response to changes in the environment. We barely notice most patterns, but what we do notice is the static result of the dynamic equilibrium of these movements resulting in "the beauty and diversity of form, color, and movement."[58]

Congruent with what we know about ecology and indigenous peoples, scientist/artist Ernst Haeckel's Biogenetic Law says species are built according to rules and that these rules are coded in the specie's life form. Haeckel's scientific drawings represent the coded patterns of the organism's growth, the organism's ontogeny as well as the evolutionary development of its species or phylogeny.[59]

Creating images at the points of places between these salient connections concretizes the growth of the organism, representing the ontogeny of the organism and making its evolution visible. The image represents time frozen on the journal page. Revealing and interpreting the patterns through images created when practicing ABPE tells the land's stories, giving clues to the evolutionary history of the land.

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57 Allen, T. and T. Hoekstra, 1992

58 Vernadsky, V. 1998, p. 61

59 Breidbach, O. 1998

Ways of Knowing

Within a post-modern context, Carole Gilligan's book, In a Different Voice: Psychological Theory and Women's Development, has been hugely significant in the way we look at differences in our perceptions of reality.[60] Gilligan's theory has been profound in awakening a culture to the existing assumption that there was a single mode of social experience and interpretation. The single mode, shaped historically by a male-dominated majority culture primarily framed the conceptions of knowledge and truth. Until the 70's relatively little attention was given to the modes of learning, knowing, and valuing specific to women. In, Women's Ways of Knowing: The Development of Self, Voice, and Mind, authors Belenky, Clinchy, Goldberger, and Tarule look at the difference between the male and female conception of knowledge and truth. They acknowledge Western culture values rationalism and objectivity while simultaneously not placing value on what is commonly stereotyped as women's thinking: emotional, intuitive, and relational.[61]

In summary, I propose the research revitalizes and brings together bodies of work that support divergent ways of knowing the natural world which extend beyond logic and reason. The primary focus of the arts-based autoethnographic research was to investigate my experience and the experience of others when practicing ABPE in the landscape as adults. My research goal was to understand how ABPE practices bring one to an awareness of patterns in the landscape and how the land's patterns, known as the codes of

60 Gilligan, C. 1982

61 Belenky, M., B.Clinchy, N. Goldberger, and J. Tarule 1986

the land's communication system yield the language of place. In the next chapter I will layout the evolution of the theory and praxis of ABPE.

CHAPTER 2

Evolution of Art-Based Perceptual Ecology: Theory and Methods

I write from the voice of an artist living in the modern world who uses art making as a way of connecting with the landscape. Since first announcing myself as an artist at age eleven, I have explored art making with my hands as a way of framing and conceptualizing my experience. Art has been a way of extending my awareness and understanding of the subject of my view. My art provides me with the language and models to explore and express my connection with that world.

Over the past 10 years, I have engaged in a way of art making that has heightened my awareness of and given me an acute sensibility to landscapes and provided me with a language in which to "speak" about my knowledge of landscapes.

This exploration began while I was doing graduate studies in art therapy at the School of the Art Institute of Chicago. During this time, I began to explore my relationship between nature and art making. The impetus of my study was my own childhood; what Thomashow calls ecological identity,[62] developed in part from my freedom of exploration in the Missouri River watershed. I was not prepared for my move to the industrial city of Chicago, not prepared for experiencing firsthand the wastelands of both people and places. Where was the nature I knew as a child? What kind of nature

62 Thomashow, M. 2002

were the children in this city experiencing, and what was the outcome of such an experience? In order to answer these questions, I had to address my own deeply seated beliefs about nature. This in itself was both a painful and exhilarating experience. My thesis, "Nature and Art As a Way to Wholeness," addressed these questions through a 12-week program I designed for inner-city youth in a public school. The program introduced nature through art making to adolescents who were diagnosed with learning disabilities and experiencing behavioral problems. The lessons I introduced about nature and art engaged the whole being: emotional, psychological, ethical, spiritual and physical. Nature was the bridge to forming a relationship with the children. I lent them my eyes, and through me they achieved a richer understanding of nature, themselves, and the world in which they lived. The children gained a voice through the arts, and they responded with dignity and respect.

During my time as a student and later as a practicing art therapist, I kept considering the idea that the tools of observation from the discipline of art therapy, which are embedded in psychology, might be applicable to other disciplines: ecological research and the study of landscapes. One particular painting experience pushed me to continue exploring these ideas. This experience began a life-long inquiry into the why's and how's of the operations of the image: its formation, its retrieval, and its application to ecology and science.

The painting experience I refer to was a painting I created in my graduate work (see Figure 1) some 30 years after an experience I had in my childhood landscape of Missouri.

The childhood experience was filled with emotion. This painting exemplifies my visceral and intuitive knowing of this place story. As the image developed in the mixed media painting, the held memory in my body of the original experience became apparent. I was taken back to the emotive and sensorial experience: the sounds, smells, temperatures, and textures I had actively sensed[63] in the fields and streams of Missouri. The art making is what brought the memory forward into consciousness. The image synthesized the embodied memories in my mind, body, and imagination.[64] The image was the fusion of space and time, bringing the past to the immediate present.

In my research in the environmental studies doctoral program at Antioch New England Graduate School, I continued to consider the relevance of the image to human cognition and ecological structures. This scholarly exploration of childhood ecological identity and image formation allowed me to frame my own childhood experience and use it as a springboard into an exploration of image formation and pattern language. Following is my journey—how I first began this exploration of an embodied pattern language and how I developed a theory and praxis with which to understand it. There were writers, researchers, and artists who were extremely significant in my thinking and theory development. They are acknowledged in this chapter.

63 Basso, K. 1996, p.55

64 Feld, S. 1996 In Feld, S. and Basso, K. 1996

My Journey

As a child of the '50s growing up in the woods and open spaces of my grandfather's land in the Midwest, I developed a relationship with nature. I was free to explore the landscape with wild abandon, running through open fields of timothy, abundant with quail, meadowlark, and bobwhite, alongside frozen streams banked by ancient cottonwood trees whose roots firmly grasped eroded bank edges. I dwelled in the rich dank smells of alfalfa baled high in the two-story wooden milk barn, and I drank from the clear spring waters lined with tight bunches of bright green watercress. I loved this place and called it home.

One afternoon a neighbor called to say there were wild dogs chasing down our cattle in the lower pasture. It was a scene from the Pleistocene Era—predators and prey and the ensuing hunt. My father and brother grabbed their guns, making sure there was plenty of ammunition, tossed them in the back of the Jeep and raced down the hill. As the oldest girl in the family I wanted to travel with the men, yet went with reservation. I, too, was pumped with adrenalin, caught in the frenzy of the hunt, the uncertainty of threatening predators. But when we got nearer the scene, my ten-year-old heart was immediately constricted with the reality of what was about to take place. I quickly took refuge behind the barn, unwilling to go further. I intuitively knew the narrative of life and death that was about to be enacted. The men continued at a fast pace on foot, the cold steel of the rifles held close to pounding hearts.

Thirty Years Later

Some 30 years later, in the process of creating this mixed media painting, (see Figure 1) I was taken back to the embodied experience of that day. The painting is not in the style of realism. It communicates a perceptual account of my experience. The painting is the embodiment of my emotional and sensory interaction with the environment, a record of the sensory data my body collected at a particular moment, a moment recorded within a temporal and spatial context.

Following is a narrative of my experience during and after creating the painting. Everything I sensed, everything I knew about the experience, dog fur, wet grass, open wounds leaking hot blood, sweat soaked in adrenaline, was within me. It is through this kinesthetic movement of my body in the act of making art that I returned to the held memory of that place story.

> *Paint to paper and the thickness begins to build. I make harsh movements with my brush capturing the gesture of that moment when dogs' mouths exploded in crimson colors. No longer is the painting just shape on paper, but through the application of thick paint with wide brush, its layers reveal the heat and tension building in that moment of fury as energy was unleashed. As colors mix and textures form, the very essence of the life force bursts into my visual plane. My sensory modalities are on full alert, my emotions saturated as the image unleashes the experience once again.*

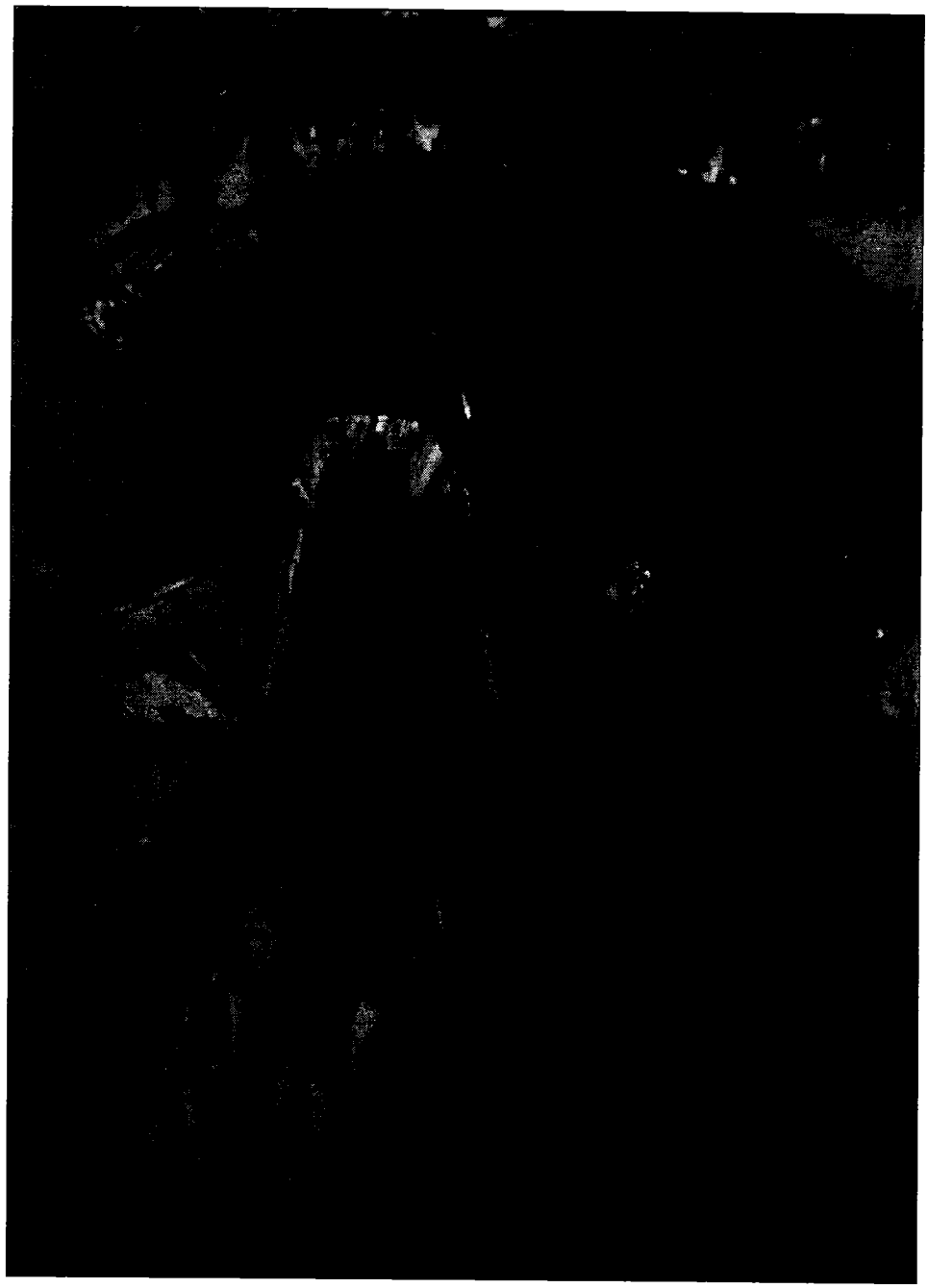

Figure 1. *The last breath of life is spewed forth and captured in this mixed media painting created years after the event, is an example of art bringing an embodied memory to consciousness.*

In the process of making and viewing the image, I was led back to the context from which the image came, in which the experience was embedded: that childhood day long ago in the pastures of the Missouri River bottom.[65] As an adult, I gained entrance to this spatial/temporal landscape again, the very psyche of the place, through the combination of art making, imagination, and memory, all of which have a common thread: the image.[66] As human beings, we have the unique capacity to disassemble the world and store it. In the art making process, the art works as a synthesizer, bringing the original experience back into focus.[67]

Within the contained space of the painting, my experience, which had been held in memory, evolved as an image.[68] The painting securely fixed the experience in memory, concretizing where I was in that landscape. Through the painting, I was able to go back in time and relive every nook and cranny of that intimate physical, psychological, and emotional experience I had as a child. [69] Memory, as Bachelard states, does not record concrete duration; yet, if it is made solid in some way, we are more apt to know its content.

> We are unable to live duration that has been destroyed. We can only think of it, in the line of an abstract time that is deprived of all thickness. The finest specimens of fossilized duration concretized as a result of long sojourn, are to be found in and

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65 Capra, F. 1996. Capra looks at what is meant by the word information, the conventional view being that information lies out there to be picked up by the brain. "...[I]information is quantity, name, or short statement that we have abstracted from a whole network of relationships, a context, in which it is embedded and which gives it meaning." When we encounter these embedded facts with regularity, we abstract them from that context and associate them with the meaning inherent in the context and call it "information." "We are so used to these abstractions that we tend to believe that meaning resides in the piece of information rather than in the context from which it has been abstracted" (p.272). Therefore, my experience in that land place revealed the knowledge of place, and place was the context. The knowledge and the meaning inherent in the context was revealed to me through the image.

66 Bachelard, G. 1983

67 Shepard, P. 1978

68 Woolery, L.A. It was not until later in my studies that I explored the concept of memory further. Cognition as defined in systems thinking opened me to a new understanding of memory.

69 Bachelard, G. 1964

> through space. The unconscious abides. Memories are motionless, and the more securely they are fixed in space, the sounder they are.[70]

Applying Bachelard's philosophy to my experience, I recognized that the job of the image is to fix the essence of time in space; the image is the container, and it holds the space. Within the contained space of the image, one is able to maneuver, to transcend both temporal and spatial dimensions. The details do not need to be in the image itself, but instead the image invites detail to be experienced through the sentient body of the artist.

Thirty-six Years Later, the Evolution of My Thinking Continues

During my doctoral work, in the fall of 1999, I returned to the river bluffs and open fields of the Missouri watershed. My purpose was to explore this dynamic connection to place I knew as a child through memory, imagination, and ABPE practices.[71]

I began this investigation with two underlying beliefs: 1) that my childhood experiences in the landscape were coded within me in some way, woven into the very cells and tissues of my body; and 2) that as an adult I could reconnect with this embodied language of place I had known as a child. My theory was that making images through ABPE practices in the original landscapes of my childhood could be the avenue by which to retrieve the coded information from childhood, taking me back to an emotive, sensorial, and intuitive knowing of those first experiences. What would this tell me? Something in

70 Bachelard, G. 1964, p.9 Bachelard's note on abstraction is highly relevant to ABPE. The abstraction practice a method found in ABPE is primary in getting to the Umwelt of a landscape. I used this practice at the Hominey Branch research site.

71 Woolery, L.A. 1999. During this time, I came to name the practice Art-Based Perceptual Ecology as described in the Introduction chapter.

the process of this energy exchange—the artist in the act of creating, as well as the formation of the image—brings the coded experience to the surface of my consciousness, where I can relive or re-experience it fully within my body. What did this lead me to consider? The codes could be a mnemonic language of place, and the image could be the dialogue of my relationship with that place.

Pattern recognition was important to our tribal ancestors, as it allowed them to know what could kill them, what they could eat, and what they could mate.[72] Their language was an internalization of their external world.[73] They knew this language intimately, as it meant their very survival.

David Abram, in Spell of the Sensuous, describes the language of the landscape as "a rhythm exchange between humans and the animate world, seen by indigenous people as a gift of the land."[74] This sentient language is an awareness and understanding of the logos and signs of a place, whereby patterns were the language, "...the invisible shapes of smells, rhythms of cricket song, and the movement of shadows. ...each terrain, each ecology seems to have its own particular intelligence, its unique vernacular of soil and leaf and sky."[75] The seminal literature that supported the development of my thinking regarding coding of childhood experiences in the land—what I have coined as patterns of

72 Margulis, L. and D. Sagan 1995

73 Abram, D. 1996

74 Ibid.

75 Ibid.

participation with the landscape[76]—will be explored in more depth later in this chapter from both a cognitive and an ecological context.

Thus my investigation began—art as a way of knowing the language of place. In 1999, I traveled back to the landscapes of my childhood, and during that year I further developed the practices of ABPE. At this time, I was not wholly clear on what part childhood memory played in knowing a landscape, but I continued to explore this concept.

One year later, armed with the knowledge gained from the experiences described above and framed by the previously mentioned set of beliefs, I began exploring art making in habitats that were new to me, ones in which I had no prior experience. I hoped that this would give me more information as to what part childhood experience played in this process. Being in new environments I expected that I would find answers to the many questions I was considering regarding image formation and pattern language and their relationship. As I explored new and diverse landscapes, I came to recognize more easily the gestures, logos, and signs of a landscape and how they provided an awareness of the patterns of organization found in these habitats. I also noticed how memory, imagination, and ecological perception[77] played a part in the process, yet their roles were not clear to me.

New questions arose from my investigation, and I began to ask: Could there be a process by which the land holds memory that is similar to how direct experience in the

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76 Woolery, L.A. 1999. In the my description of patterns of participation in the landscape, I think of the patterns as a tangible manifestation of the exchange or interaction that occurs between and amongst organisms in the landscape. The patterns are the result of dynamic equilibrium or movement in the landscape.

77 Gibson, J. 1983

landscape is held as memory in human cognition? What is the commonality between human cognition and ecological structures? And, how might I become aware of the lands memory? What would this tell me? I know that the ecological evolution of a landscape can be read through its gestures and artifacts. Could I consider the process of coded memories of place consistent with how memory is coded in human cognition? I knew that the practices of ABPE brought my childhood memory of direct experiences in landscapes to a conscious level. Could ABPE bring the land's memory, patterns in the landscape forward into my consciousness as well? What did this lead me to consider? Can I know the subtle changes in the land that are happening right before my eyes, but that I cannot see, by creating images at this site by practicing ABPE?

As I continued to develop and refine ABPE, I furthered my investigation of how the image presents a tangible awareness of the patterns in the landscape. Those patterns, Vernadsky says, are a result of the dynamic equilibrium of movement; they are the patterns of organization common to all living organisms.[78] What did this lead me to consider? Could the image, which is energy made tangible,[79] be a recapitulation[80] of the patterns found in the land, an interchange of energy between artist and place? Could the image be the link to understanding this pattern language and support me in speaking a language that links all species?

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78 Vernadsky, V. 1998

79 Allen, P. 1995

79 Haeckel, E. In O. Breidbach 1998

80 Dorris, M. 1996

These are large questions, but ones that naturally come out of the art making process. This investigation of a mnemonic language is not a simple query but a complex and challenging one if I am to understand both its vernacular and its translation. During this investigation, what was constantly presented to me was the hard work before me—most specifically, finding ways to express to others the process of embodying knowledge and how the art making plays a part in the retrieval and communication of knowledge. I also recognized that the image is critical to knowledge construction, that the process includes the storage, retrieval, translation, and communication of knowledge, but I was still unclear as to its relevance.

Learning the Language

When practicing ABPE, I discovered I have the ability to enter a temporal and spatial dimension of a particular land place, revealing a world that I could not see or know or understand before making art about it. A children's book offered me a means of understanding this phenomenon. In his book, Sees Behind Trees, Michael Dorris[81] follows the life of a young Native American boy living in 16th century America who learns to turn his handicap of poor eyesight into an advantage by sharpening his other senses. Walnut, in a coming of age ceremony, is asked to listen to the woods and "see" what can't be seen. His elder, Gray Fire, teaches him the sentient language that all of our ancestors once spoke. Here is a passage from the book:

81 Dorris, M. 1996

> We traveled swiftly and without further conversation. Every now and then Gray Fire would hesitate, press his palm against the flat of a rock, or study a pattern of bark before turning right or left.
>
> Will you show me how to do that? I asked him. How to find your way around out here? I put my hand on a tree trunk he had just touched. It was soft and mossy.
>
> Your body will remember where it has been if you let it, he answered. It recalls what's familiar—but not as your mind does. With your mind you stand outside the world and look in. With your body you are inside already.[82]

Dorris touches the very essence of my work. It is through our sensing body that we experience the landscape and embody the knowledge of place. I intuitively knew I was onto something, but I had not put all the pieces together before. Then the challenge presented itself: How do you share such an intuitive knowing with others, when the cultural constructs such as language limit the possibilities?

How Does the Coding Take Place?

The next step in understanding the act of embodying knowledge was to understand the physiological process of embodiment. Pertinent to this process is the way in which knowledge is stored, retrieved, and communicated. Cognitive science tells us that one way in which knowledge is communicated is as a symbol or image. Many scientists see the capacity to form and use symbols as something very specific to the human species. Art therapy recognizes symbolism as an important aspect of early childhood development as it

82 Dorris, M. 1996, p. 52

plays a part in psychic functioning.[83] My interest in image formation led me to studies written by David Beres, M.D., in the '60s, which gave me further understanding.

One of the criteria believed to distinguish humans from their primate relatives is the nature of human psychic functioning. In 1964, Dr. David Beres, then president of the American Psychoanalytic Association, gave a lecture on "Symbol and Object" at the Menninger Clinic in Kansas.[84] His talk presented some of the foundational research in the area of image formation. At the time of his lecture, there was a standing assumption that stimulus acting upon the neuronal structure of the brain, whether in man or animal, leaves a registration of its activity in some way. Also at that time, research in macromolecular chemistry showed evidence that changes in nerve cells in the ribonucleic acid molecules were evident following stimulation and that these changes are the basis of a memory trace.[85]

Dr. Beres's research investigated psychic activity, focusing on the unique capacity humans have to form mental representations in contrast to the capacity shared by humans and animals to experience mental registrations. It was assumed that, in humans, mental registration precedes mental representation,

> ... that is, perception and memory precede the development of the psychic manifestations, which may be observed in the evocative capacities of man. Mental registration is the basis of memory, but for the evocation of imagery, thought, and especially symbolization, there must be something additional—what is postulated as a mental representation.[86]

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83 Piaget, J. 1971

84 Beres, D. 1964

85 Beres, D. 1965

86 Beres, D. 1965, p.4

There is a whole system involved in the coding of experiences, according to Beres. At the first level is the sense-data collection of the primary modalities, the pre-perceptual phase. The sensory nerve endings respond to temperature, pain, touch, proprioception, and pressure, as well as sensory responses that result in vision, hearing, taste, and smell.[87] As a young child at the tributary of Hominey Branch, I rolled in the pungent smells of late summer grass and plunged into the icy cold waters of deep eternal springs. At that point of skin touching skin,[88] Beres says, raw sense data is being collected: Color, sound, smell, temperature, and texture all are being received by the peripheral sense organs.[89] But as a human species, we are not only the organs; we cannot see without a retina, but neither can we see with just retinal patterns of stimulation.[90] The end organs, our bodies, cannot interpret the sensations we receive, as the form they come in is complex and changeable. The next level is the organization of these primary sensations into percepts. Perception becomes the process of making meaning out of sensation; perception and sensation work in tandem as the body interfaces with the environment.

The hierarchic progression from sensation to perception happens in all forms of animal life. "In accordance with its level of development, its place in the evolutionary scale, each organism creates from the raw sense data of the external world its own perceptual world, the umwelt of Uexkull. Sight becomes vision; hearing becomes sound;

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87 Beres, D. 1960

88 Vernadsky, V. 1998. Vernadsky speaks about the biosphere having a face. I interpret this to be the biosphere having skin, which molds and frames its face; thus, my skin is touching the skin of the biosphere when I am bodily in contact with the elements of the landscape.

89 Beres, D. 1965

90 Klinger, E. 1980

sensation becomes percept."[91] One takes sensory data from the outside and internalizes it. The internal state is then altogether altered from its original configurations.

In his paper, "Perception, Imagination and Reality," Beres describes this second level of sensations organizing into percepts.[92] Animals as well as humans recognize the precepts. The responses to sensation are registered as gestalts or configurations of space, form, and color. They are comparable to signals or clues and dependent on immediate, direct sensory stimulation. He refers to these signals as mental representations.

Klinger[93] explains that in order for perception to occur the brain must construct and store models or schema. The model is a map of the patterns of activity—one's interactions with the environment. Over time, the model continually accepts sensory information, the data is registered, and the model changes as a result of new information.

According to the perceptual models of Beres and Klinger, my initial activity in landscapes, or what I call patterns of participation, were percepts stored as memories and therefore could be brought to a conscious level. As an adult, when I returned to the same landscape, I was collecting new sensory data through direct experience. The image I created through ABPE practices became the form, which carried my experience in the

91 Beres, D. 1965, p.5. For a comprehensive discussion on the term umwelt, look at Jacob von Uexkull, a philosophical anthropologist who conceived the term in 1920. It refers to the physiological perceptual environment of any organism.

92 Beres, D. 1960, p.328

93 Klinger, E. 1980

land, past and present.[94] In this example, I was participating in the first and second level of perception according to Beres.

The third level of perception is independent of immediate, direct sensory stimulation. This perception becomes a mental representation of something not actually present to the senses at that time. "Symbolism is one type of mental representation among several, but a crucial one since it provides the building blocks for more complex mental representation: images, fantasies, thoughts, concepts, dreams, hallucinations, symptoms, and language."[95]

Beres believes that symbol is one of the earliest mental representations of an absent stimulus, internal or external. My drawing created over 30 years after the dog incident was an example of the third level of perception. There was no direct sensory stimulation, only a solicitation of the symbolism, stored in memory, of my perception of this experience. The symbolism as Beres refers to it is a transitional object that allows me to go back to a particular moment in time. The transitional object in this case was the image or the painting itself.

Studies in Animal Behavior

One way I was able to understand pattern language in landscapes and the human capacity to translate this language was through the scholarly study of animal behavior. In

94 Dewey, J. 1934, p.18. The form could be any art form as it "carries the experience, not as vehicles carry goods but as a mother carries a baby when the baby is part of her own organism."

95 Beres, D. 1960, p.329

humans and animals alike, our senses are a system of information processing. From a physiological point of view, human sensory perception begins with specialized receptor cells that convert a particular form of physical energy into bioelectric currents. Sensory perception in animals is difficult to measure because human perceptions get in the way of our observations. I cannot ask the hawk directly whether he can sense the approaching storm.

Yet there is a way we can make those determinations by observing what the animals actually do. By observing an animal's behavioral response to changes in the environment, we can know that they are "reading" the landscape patterns—their behavior tells us so—and from this we can extrapolate that they have a language that is founded on a processing of information that is common to the species. Cheney's and Seyfarth's book, How Monkeys See the World, is a study of the social behavior of non-human primates, or "almost minds" as they are called. Their research contributes to cognitive science, which is concerned with how the human mind represents and processes information. [96]

Cheney and Seyfarth explored the possibility of the vocalizations and social relationships of vervet monkeys being stored as mental representations. With monkeys and apes, "they not only recognize the relationships that exist among others but also compare types of social relationships and make same/different judgments about them. To do this the animals must have some way of representing the properties of social

96 Cheney, D. and Seyfarth, R. 1990

relationships."[97] Cheney and Seyfarth recognize that they have no evidence of the monkeys' abilities to register patterns of behavior of the other monkeys as mental registrations, but they can hypothesize based on their observations of the monkeys in the field. These mental representations would imply that the monkeys have labels that describe mothers and offspring or that distinguish closely bonded individuals from others in the group. In order for the monkeys to make such comparisons, they must be able to make mental representations of the objects denoted by a vocalization, even in the absence of the object.[98]

Cheney and Seyfarth point out that we cannot know how much information is contained within a mental representation, how the information is structured, or how it is coded. "We can, however, consider what representations are good for and how under natural conditions monkeys might benefit from having them."[99]

My understanding of animal communication was increased by reading studies authored by scientist Karl von Frisch, along with Konrad Lorenz and Niko Tinbergen.[100] Von Frisch viewed the behavior of the bee as the product of natural selection operating on specific traits in a specific environment. He stressed the close interaction between the bee's perceptual abilities and its adaptation to a particular habitat. The bee succeeds at finding food through mapping and communicating navigational cues through an elaborate

97 Cheney, D. and Seyfarth, R. 1990, p.175

98 Ibid.

99 Cheney, D. and Seyfarth, R. 1990, p.176

100 Hughes, H. 1999

language used to receive instruction from other bees in the hive about the location of the food source.

This form of communication von Frisch called the "waggle dance."[101] The dance communicates the direction (relative to the sun), distance, and quality of the food source. The bee reads the patterns in the landscape through an elaborate data collection and processing system and communicates this data as a universal language to others of its species. Research in animal behavioral science brought me further in my understanding, which brought new questions. Who is to say that only certain animals in the animal kingdom have the sensory capabilities for such an elaborate language system that is so intricately tied in with the landscape? Were humans once a part of this ubiquitous language system? Has this capability of knowing the language of place been naturally selected out of humans?

An Ecological Model of Patterns In the Landscape

Another premise of my theory development is that the landscape holds ecological memory in the form of patterns. In support of this premise is Allen and Hoekstra's ecological model found in Toward a Unified Ecology. Their criterion for a unified ecology model is: landscape, ecosystem, community, organism, population, the biome and biosphere. It is this landscape model that helped me to gain a better understanding of patterns.

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101 Hughes, H. 1999, p.177

Patterns are indicators of the land in flux—energy systems moving at a spatiotemporal scale. Allen and Hoekstra define scale-independent patterns found in the landscape as "meanders, spirals, explosions, and branching systems."[102] These patterns are the recognizable measure of interactions between and amongst organisms in the landscape. Vernadsky tells us that movement, resulting from the multiplication of living organisms, is continually taking place all around us.[103] Yet, he says, we barely notice it. "What we do notice most readily is the static result of the dynamic equilibrium of these movements resulting in the beauty of nature—its diversity of form, color, and rhythm."[104] To our unaided eye, the landscapes' patterns present themselves in the way that water moves through the landscape in the form of a river or, at another scale, in the way in which a mountain forms as seen in the fossil evidence.

Allen and Hoekstra suggest that what is recognized in the landscape by both living organisms and human perception is a reflection of what is important to our survival.

> It is reasonable to suppose we have been selected to perceive the world in a way that allows prediction. Prediction comes easier in familiar circumstances. Since changes in scale radically change perception, it would be of advantage to perceive in a way that recognizes patterns that occur at multiple scales; then the world remains familiar even under changes in scale.[105]

The first year when I was exploring landscapes that were unfamiliar to me, I practiced ABPE in the dry riverbed of the Santa Cruz River. While observing a red-tail

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102 Allen, T. and Hoekstra, T. 1992, p.87

103 Vernadsky, V. 1998

104 Vernadsky, V. 1998, p.61

105 Allen, T. and T. Hoekstra 1992, p.87

hawk flying overhead, I asked the question, what cues the red-tail hawk to my presence? According to Allen and Hoekstra, I could assume what first grabbed the hawk's attention was my body, sensed as an anomaly of the patterns in its familiar landscape. The hawk was alerted to the alarm because of her perceptual knowing of this landscape. I could assume from the hawk's behavior that she was sensing patterns at the scale of the landscape, but could she sense patterns at other scales? And what could I extrapolate from the hawk's behavior to my own experience in the desert landscape? Sitting in the dry riverbed, I visually sensed the approaching storm (foreboding storm clouds moving in), as well as auditory sensations (the crashing sounds of thunder). But what was most profound was how my corporeal body cued to vibrations in the biosphere that were not tied into sight and sound.

I suggest I was sensing the phenomenon of thunder at a scale other than what was available to sight alone. Perhaps through my body I was sensing vibrations, reading them as patterns of activity or energy, brought about by a change in the molecular structure of atmospheric gas. These thoughts led me to ask this question: If patterns at the scale of the landscape, such as clouds, are most available to us through our sense of sight, what sensory modalities are tuned to recognize patterns at the scale of populations or communities?

The landscape criterion developed by Allen and Hoekstra supports the premise that patterns are found at all dimensions in the landscape, but my question remained: If perception is key to reading patterns, how do humans perceive these patterns? And how is perception knowledge?

Systems Thinking View of Cognition

During the '60s, Gregory Bateson and Humberto Maturana independently developed a new concept of mind. Prior to this time, the traditional concept of mind demanded that the brain was necessary for mind to exist, which suggested that knowing involved thinking. Bateson intuitively developed criteria for a mental process whereby he would feel empathy with the plant. Through his embodied observation method of observing plants and animals in the field, he would describe a plant in explicit detail using what he considered to be "the language of nature" or a language of relationships. From these experiences, it became clear to him that the phenomenon of mind was inseparably connected with the phenomenon of life.

At the same time, Maturana and Varela developed their systems theory of cognition, the Santiago Theory[106] described earlier in the Literature Review. Maturana explored the questions: What is the nature of life? What is cognition? "Eventually he discovered that the answer to the first question—autopoiesis[107]—provided him with the theoretical framework for answering the second."[108] His theory suggested that the simplest organisms are capable of cognition or the process of knowing.

> The simplest organisms are capable of perception and thus of cognition. They do not see, but they nevertheless perceive changes in their environment—differences between light and shadow, hot and cold, higher and lower concentrations of some chemical, and the like...The new concept of cognition, the process of knowing, is

106 The Santiago Theory is described in greater detail in the Introduction chapter.

107 Marguluis, L. and D. Sagan 1995, p.23. Chilean biologists Humberto Maturana and Francisco Varela coined the term autopoiesis. The word comes from the Greek roots meaning self (auto) and making (poiein, as in "poetry"). Autopoiesis is life's continuous production of itself. Autopoiesis behavior is the self maintenance of organic beings, suggesting they are alive. These entities are continuously metabolizing through chemical activity and energy flow.

108 Capra, F. 1996, p.174

> thus much broader than that of thinking. It involves perception, emotion, and action—the entire process of life.[109]

In this systems theory, cognition or the process of knowing suggests the brain is not necessary for cognition or mind. This implies that knowledge can be acquired through other avenues than the brain. I bring this concept into the conversation because I see it as central to my theory: ABPE as a way of knowing the language of place. The Santiago Theory suggests that the simplest organisms are capable of holding knowledge, and this knowledge is transferred via energy exchange.

I infer from Maturana's theory that the held memory of the landscape or the ecological knowledge is the coded interaction between organisms, which implies that all organizing activities of living systems are cognitive interactions.[110] What this says to me is that all nature contains original knowledge and that patterns found in living organisms are a record of the exchange of energy or knowledge between organisms. Once again, this question came into my thinking: Could humans, as part of nature, be privy to ecological knowledge through a relationship with the landscape via an energy exchange such as image making?

Haeckel's View On the Recapitulation of Nature's Knowledge

I experienced one of those ah-ha moments in my theory development when I came across biologist Ernst Haeckel's work. Haeckel provides two strong foundations for my

109 Capra, F. 1996, p.175

110 Capra, F. 1996

work. In his Biogenetic Law, he suggests that the evolutionary history of a landscape is embedded in each organism, and, as a scientist, he used art to access that knowledge. Haeckel claimed that all species—unicellular organisms, plants and animals, and human beings—represent stages in the developmental process of an ultimately unified genealogy of living organisms. He believed the diversity of living things is ordered along a historical time line that can be traced back to a simple, basic, "primordial" form.[111] According to Haeckel, in the development of life forms, "any species in a branch in a phylogenetic tree is built according to rules acquired through and conserved in the development of this life-form."[112]

Haeckel, as artist, scientist, and practitioner, painted and drew multiple images of the organisms he studied, which can be seen in the book, Art Forms in Nature.[113] Contemporary researchers who study Haeckel's work suggest he used the image making process to access the knowledge embedded in the organism and through this process was able to know the ontogeny of each organism.

In her book, Heteroptera: The Beautiful and the Other or Images of a Mutating World, Cornelia Hesse-Honegger suggests pictures or images created within scientific illustration are often "precognitive." In her studies of scientists/artists such as Haeckel and others, she recognizes the knowledge acquisition takes place during and through the art making process. This implies the image making is a way of extending nature's original

111 Breidbach, O. 1998, p. 9

112 Ibid.

113 Breidbach, O. 1998

knowledge. In Haeckel's relational theory of nature, he suggests it may not be so much an extension of nature's knowledge as it is a recapitulation of the original knowledge. Breidbach writes on Haeckel:

> Haeckel's reasoning is simple: humans are nature; they are a part of, and the result of, evolution. Our actions and thoughts are products of this evolution. Accordingly, when humans come to know something, ultimately it reveals their own nature. Our knowledge—which has developed in and is subject to the laws of nature—is in itself nature (and, according to Haeckel, nothing more). The draftsman, his sensory organs, his motor activity, is results of a development with which, in the end, nature merely represents itself.[114]

Thus as artist, in the act of forming the image, the knowledge of the organism being studied, which is energy, is transferred to the artist. The artist embodies the organism's knowledge through a phenomenological relationship.[115] In the act of art making, energy is exchanged between the artist and the organism. The image, which is energy made tangible,[116] is formed through the artist's motor activity. From this, I extrapolate that the wisdom held within the organism comes through the artist and into the image; thus original knowledge held in landscapes lives in the image and in the artist. In the ABPE practice, I experienced the image as the recapitulation of nature's wisdom.

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114 Breidbach, O. 1998, p.14

115 Earlier in this chapter, I wrote about my learning that came from reading the book, Sees Behind Trees, "with your body you are already inside it." Haeckel exemplifies the body/nature connection in his theory on man is nature (Breidbach, O. 1998).

116 Allen, P. 1996; McNiff, S. 1981

Summary

In the dog painting experience, I came to know that my body held a coded memory of my childhood experience in landscapes and that I could access those memories through the practice of ABPE. The art making brought the memory alive bringing it to a conscious level where I could re-experience it in my body. The image allowed me a direct visceral connection back to that day.

From that experience, I extrapolated two things: One, that my experience in the landscape as a child was embodied, stored in cognition. Beres, Klinger, and others helped me to understand from a physiological framework that I could recall that day because it was coded in my memory. Bachelard's theory on "fossilized specimen" helped me to understand how memory is an abstract time that can be brought forward into consciousness by securing it in some way. The painting securely fixed one moment in a day of my life.

Two, the painting lent me the ability to "sense" more than my eyes could see. The image was not only "fixing" where I had been in that moment in time historically, but also it was making sound where the landscape was in that moment in time ecologically. I noted that the primary memories coded from that experience were the sensory and emotional pieces. There were also other memories of that day that incurred more than an emotional intelligence, information secured from the landscape itself. Through direct experience I came to know ecological elements of the landscape such as the temperature, season, and moisture content of the air.

Dorris gave me insight as to how I could know the ecological elements of the place as my body was inside the landscape unlike my mind, which was outside looking in. Gibson, Husserl, Merleau-Ponty, Nabhan, Shepard, and others helped me to understand that my relationship to place was a reciprocal relationship. I was shaped by the elements of the land—the patterns, which are a code of the energy transformation in a landscape—and I cannot separate myself from the environment in which I exist.[117] These seminal writers gave foundation to my original concept: patterns of participation in the landscape.[118]

As the evolution of my thinking continued, I focused on how the image allowed me to enter the land's story and what that meant. I believed there was a relationship between the coding of experiences in human cognition (held memory) and coding of the land's ecological processes (held memory). Vernadsky, Allen and Hoekstra, and others helped me to understand how ecological processes in the landscape are coded. Animal behaviorists showed me that animals have a language common to their species that comes as a result of their reading the landscape. My goal remained to know the language of place. We know our ancestors had that capacity. Could it be possible that modern man could read the landscape in a way similar to how animals read the landscape: to the way original people read the landscape?

My studies in art therapy supported my belief that the image was the link to the unconscious and could give me access to knowing the language of place. Haeckel's work

117 Gibson, J., 1983

118 Woolery, L.A. 1999

helped me know that the knowledge of "life" is embedded in the organism and comes through the image making process and into the artist. The act of making the image is the recapitulation of the land's knowledge.

The Evolution chapter shows that all of my questions were not answered at this stage of my thinking. But it prepared me to begin the research. This layering of inquiry-based learning, seminal literature, and discourse helped me to visualize the methodology I used in my research and which will be presented in the next chapter.

CHAPTER 3

Methods

"The ultimate purpose of research, and art is to communicate
a new vision or understanding of a phenomenon."[119]

In most public educational systems framed in a Western European paradigm, as soon as children enter school they are persuaded to let go of their inherent ways of understanding the world. Instead, they are required to adopt a "... linear language style in which logic prevails, a style that represents almost exclusively a hierarchical, convergent, 'scientific' way of ordering the world."[120] Missing in this monistic methodology is recognition and support of students whose intelligence or learning style does not follow a line of logic and reason.[121]

History has recorded many scholars such as Galileo, Einstein, and McClintock as divergent thinkers. McClintock acknowledged she used an internal vision in her scientific inquiry. Her intuition was an internal knowing of that which was not evident or deducible in her mathematical equations.[122] Another creative process for knowledge construction is

119 Hervey, L. 2000, p.64
120 Gallas, K. 1994, p.16
121 Gardner, H. 1999; Guild, P. 1998
122 Fox Keller, E. 1983

imagination, the means of forming images in the mind.[123] Einstein acknowledged his use of imagination as he tested theories of science.[124]

Honoring multiple truths or realities requires redefining our understandings of the very nature of mind, knowledge, and intelligence. This is not an easy task.[125] In addition we must find pluralistic methods of inquiry and ways of discourse as the language and system of discourse we choose mediates and defines the very experience we attempt to describe.[126]

There is a hierarchical status to science methodologies—"hard data," that of statistics, ranks higher than "soft data," that of qualitative studies. "Numbers are seductive in our modern society, conveying a sense of accuracy and credibility even though the measurements may be unreliable and meaningless. Science places the highest value on objectivity. Subjectivity suggests bias and unreliability."[127]

In the postmodern era, boundaries of traditional perspectives on inquiry and knowledge are shifting to transgressive modes of expression and representation, which yield a more holistic understanding of the phenomenon being studied.[128] The core of postmodernism is the doubt that any method or theory, discourse or genre, tradition or

123 Singer, J. 1980; Warnock, M. 1976

124 Corbin, H. 1969

125 Eisner, E. 1985

126 Eisner, E. 1981

127 Patton, M. 2002

128 Slattery, 2001

novelty, has a universal and general claim as the 'right' or privileged form of authoritative knowledge.[129]

Qualitative Paradigm

I chose a methodology framed in the qualitative paradigm that communicated the learning experiences of the researcher and co-participants and provided an understanding of the phenomenon being studied.[130] These experiences came from practicing ABPE, which led to knowing landscapes through art making, intuition, imagination, emotion, and embodied knowledge. The research was guided by three overarching questions:

1. How is the practice of art-based perceptual ecology a way of knowing the language of place that does not rely on the dominant Western scientific paradigm of logic and reason?

2. How does the image created in art-based perceptual ecology reveal the land's stories and lead one to clues of the evolutionary history of the land?

3. Are the patterns discovered in the images meaningful to gaining a deeper understanding of a place?

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129 Richardson, L. 1994, p.517

130 Lawrence-Lightfoot, S. & Davis, J. 1997

Some of the key words that come to mind when I describe these experiences are: a subjective exploration of a phenomenological study of landscapes; art as inquiry, data collection, interpretation, and presentation; pluralistic ways of knowing; landscape as subject and co-participant in the research; image as form or representation; and narrative as more than text, written or oral.

When determining a research method I considered Skolimowski's words, "Ascertaining a different universe requires a different methodology."[131] Therefore arts-based autoethnography was my method of choice, a hybrid form of research methodology grounded in the creative arts therapies, education, and social science models.

In this chapter I will give a historical overview in a chronological format of the development of arts-based autoethnography. Art-based inquiry comes out of the canon of the creative arts therapies. Arts-based educational research comes out of the canon of education. Autoethnography is an emerging field of ethnography. Arts-based autoethnography is a synthesis of autoethnography and arts-based educational research.

The writing of creative arts professional Shaun McNiff was my first introduction to art-based inquiry. [132] I will begin the chronological perspective with McNiff.

131 Skolimowski, H. 1994, p.160

132 McNiff, S. 1986

Art-Based Research (ABR)

For many years, Shaun McNiff has been known for his work in promoting alternative forms of research within his respective field. The creative arts therapies bring a multi-disciplinary approach to the therapeutic relationship, which includes: visual arts, dance/movement, theater and performance, music, and poetry. McNiff advocated an arts oriented research that acknowledged meaning resulting from a relationship between researcher and phenomenon being studied.[133] Operationally, science methods are concerned with disproving a hypothesis and do this through an objective-based inquiry. Therefore, science is not concerned about the relationship between researcher and phenomenon. But if you think about it, the research of an artist in the studio can be likened to what a chemist does in a lab, or a biologist in the field. The research is focused on experiments with media just as the chemist works with physical substances.[134] Another similarity between artist and scientist is each is asking a question and looking for an answer.

Continuing into the mid '90s, McNiff noted many creative arts therapists were still dismissing the uniqueness of the arts phenomenon as they felt they had to justify their work through traditional conceptual frameworks and research methods. In his book, Art-based Research, he suggests, "the most important frontier for art-based research is the

133 McNiff, S. 1986

134 McNiff, S. 1998

empirical study of the process of art making."[135] As a practitioner/researcher, McNiff thinks creative arts therapy research should have "the smell of the studio, stay close to the practice of art and the statements of artists, respect images, and allow them (*the images*) to present themselves in ways native to their being."[136] (Italics mine)

Criteria for ABR

Following in McNiff's footsteps, Lenore Wadsworth Hervey, a dance/movement therapist has made tremendous advances in art-based inquiry. In her book, Artistic Inquiry in Dance/Movement Therapy: Creative Alternatives for Research, she offers a detailed chronological account of art-based inquiry.[137] She addresses the concern for validity and legitimacy of such emerging research paradigms by making these suggestions; artistic inquiry is inquiry that uses artistic methods of data collection, analysis, and presentation; uses and acknowledges a creative process; and, is aesthetically motivated and determined. In the data collection stage, the art is made in relation or response to the research question and the art work is considered form or representation. In the data analysis stage, the transformative processes, or analysis are artistic methods of art making. And, the presentation of findings involves art making. Hervey suggests the art works ability to communicate is determined by how it is presented and in what context it is presented.

135 McNiff, S. 1998, p.55

136 McNiff, S. 1987, p.291

137 Hervey, L. 2000

The ultimate goal of any arts-based data analysis is to find meaning in the data and to understand it as a response to the research question.[138] One of the unique aspects of data analysis and interpretation in art-based inquiry is that there can be no interpretation of the art work by someone other than the artist. Unique to ABR is the method of dialoguing with images. A description of the method is found later in this chapter.

Arts-Based Educational Research (ABER)

Approaches to research in the American educational research community have become increasingly diverse over the past quarter century. Among those approaches, coming out of a postmodern era of social science research, is what is called arts-based educational research (ABER). This approach to research is rooted in the methodologies and epistemologies of the arts and humanities.[139] Arts educator Elliot Eisner has been a proponent for pluralistic methodologies specifically in the field of educational research and evaluation.[140] Eisner's view is that our problems need to be addressed in as many ways as they are experienced and understood.[141] In 1997 he refined and reframed his concepts and came to call them arts-based research.

In 1981 Eisner proposed ten dimensions of an artistic approach to qualitative research. [142] This was the first comprehensive and tangible directive for researchers using

138 Hervey, L. 2000

139 Development of an arts-based inquiry from an education model was happening simultaneous to the development of the creative arts therapies model.

140 Eisner, E. 1981

141 Ibid

142 Ibid.

art as inquiry. Following are just a few of those dimensions as they pertain to my research.[143] He suggested that in artistic approaches to research the form of representation is an individual creation and the meaning is embodied in the shape or form itself. Validity is determined as to how well the research informs, it's usefulness determined as to how well it moves and persuades the audience. In artistic approaches to research the focus is on understanding and meaning, not the discernment of truth. Understanding comes by living the experience of another and the language of art is an excellent means in which to define that experience. A unique element to artistic approaches to research is that emotion plays a central role in the knowing process. Eisner, McNiff, and Hervey acknowledge that arts-based research methodologies integrate subjective and objective elements of the experience as well as the introspective and the empirical.[144]

Criteria for ABER

In any new emerging research, there is great need for addressing the questions that arise about the research validity and scholarship. Seale writes that the debate in ABER has shifted from the focus on validity and reliability, which is borrowed from the quantitative paradigm to other possibilities.[145] Within ABER the suggestion is being made to find

143 At the time Eisner wrote his ten dimensions, he primarily referred to the written text as representation.

144 Eisner, E. 1981; McNiff, S. 1998; Hervey, L. 2000

145 Seale, C. 1999

ways in which to acknowledge the scholarship of the inquiry and not to put demands on the research that cause it to conform to the dominant paradigms and methods.[146]

Autoethnography

Autoethnography, a new and emerging approach to ethnographic research, unites ethnography, described as looking outward at a world beyond one's own and autobiographical intentions, considered gazing inward for a story of one's self.[147] In autoethnography, the researcher becomes the research subject with the researcher's personal experience the topic of investigation, addressing it to an academic and public audience.[148]

In her book, The Ethnographic I: A Methodological Novel About Autoethnography,[149] Ellis demonstrates how the personal narrative is the center of the autoethnographic research process. The goals of the narrative are to illustrate, evoke and to invite readers into the text that they might relive the experience.[150] We cannot study lived experience directly, because language, speech, and systems of discourse mediate and define the very experience we attempt to describe. We study the representations of experience, not experience itself.[151]

In autoethnography the representation of the experience is referred to as the

146 Slattery, 2001

147 Ellis, C. and Bochner, A. 2000

148 Denzin, D. and Lincoln, Y. 2000; Goodall, H. L. 2000

149 Ellis, C. 2004

150 Schwandt, T. 2001

151 Denzin, D. and Lincoln, Y. 2000

personal narrative and sometimes must be recalled or reconstructed from memory long after the actual experience. Thus much of autoethnography relies on embodied knowledge.

Narratives are usually written in first-person voice, but they cannot be classified as only written or oral text. The arts are a perfect medium for the exploration of personal narrative. You will find many variations of the narrative in autoethnography such as — performance, novels, photographic essays, audio essays, journals, and paintings as well as short stories, poetry, fiction, and novels.[152] Reason and Hawkins point out, that a translation of the meaning, which is often an intuitive or tacit knowing, is not always possible through the culture's language but can be understood more clearly through other forms of communication such as story. In the representation the meaning of the experience becomes explicit.[153] "There are many languages in which meaning can be created and communicated ...the languages are analogical and symbolic; they do not point out meaning directly; they demonstrate it by re-creating pattern in metaphorical shape and form."[154]

Criteria for Autoethnography

Validity and reliability are important conversations in autoethnography. Ellis suggests one might determine validity by whether the research helps readers communicate with others different from themselves. Ellis encourages us to do something beyond asking

152 Ellis, C. and Bochner, A. 2000

153 Reason, P. and Hawkins, P. 1988

154 Reason, P. and Hawkins, P. 1988, p.81

if the work has reliability. She feels that is not a valid question, as our personal narratives are created from situational locations, remembered past, and an imagined future. Also, validity can be determined if the research is useful or offers ways to improve the lives of the researcher or others. Ellis further suggests that because there is no single standard of truth, she defines validity as, work, which seeks verisimilitude: "It evokes in readers a feeling that the experience described is lifelike, believable, and possible."[155] Others, such as Richardson deem it necessary that such creative and emerging practices of ethnography be held to very high standards. Her criteria, the work must have 1) substantive contribution, 2) aesthetic merit, 3) reflexivity, 4) impact, and 5) expression of a reality. [156]

Arts-Based Autoethnography

Conversations on arts-based autoethnography although not as defined as other art-based inquires, are flowing out of subgroups associated with ABER and autoethnography and are making great headway in addressing issues of credibility and reliability. Practicing an emerging methodology is subject to all of the same challenges of autoethnography. Questions arise regarding the relationship between the observed and the observer; and how the value system of the observer affects the perception of the object observed.[157] Arts-based autoethnography is controversial not only among hard scientists because of its

155 Ellis, C. and Bochner, A. 2000, p.751

156 Richardson, L. cited in Patton, M. 2000, p.87

157 Patton, M. 2002

subjective nature, but also among many social science academics because of its blurred boundaries between social science and literary writing.[158]

Susan Finley, who writes on the issues of standards in arts-based inquiry acknowledges she is committed to research practices that are ethically, politically, and culturally responsive.[159] Her rubric includes asking some of these questions: "Have researchers been willing to experiment with form, both in their practice of research and in their representations? How does the form of representation create an open space for dialogue between readers/perceivers and research participants? Does the research provoke questions, rather than draw conclusions?"[160]

Form and Representation in Art as Inquiry

Karen Scott-Hoy[161] a health care worker from Vanuatu, a small island nation in the South-West Pacific is able to articulate the concept of a non-conventional personal narrative through her experience of painting. Her work is situated in the arts-based autoethnography forum and bridges the gap between all three arts-based inquiry methods. Following is a portion of her abstract for the article, "Form Carries Experience: A Story of the Art and Form of Knowledge."

> Artistic evocative autoethnography, as the author conceives it, is both a product and a process. In this article, she hopes to provide insight into some of the issues and questions involved in the process of creating such a work, by inviting the reader to

158 Wadeson, H. 1980

159 Finley, S. 2003

160 Finley, S. 2003, p.294

161 Scott-Hoy, K. 2003

> be privy to the process of creating the oil painting: Form carries experience and its accompanying story.[162]

Scott-Hoy also recognizes the value in the physical and kinesthetic experience involved in art making. She says, as the artist/researcher it helps her to "reorganize my experience so I can perceive it freshly. Painting enables me to go back to experiences and clarify them with emotion and detail."[163] For her, this expressive, interpretive approach through painting is a way of generating new knowledge. This concept aligns with current research in multiple intelligences, learning styles, and brain research as they explore the pluralistic ways in which humans take in information and construct knowledge.[164] Thus alternative forms of representation "...acknowledges the variety of ways through which our experiences are coded."[165]

Image formation is the expression of the experience for Scott-Hoy: it is how she comes to know the world, through a process of picturing. Thus the form is not an interpretation of the experience, but it is of it. Dewey says, "Form carries the experience not as vehicles carry goods but as a mother carries a baby when the baby is part of her own organism."[166] Following is an excerpt from Scott-Hoy's narrative of the painting process.

> Loading the knife from the palette, I painted my hand reaching into her world, an extension of the arm depicted in my world; however, the bare arm looked wrong. I squeezed the color from the tube, mixed the paint, and formed the dress. I stepped back and looked again. I turned my attention back to the painting, looking

162 Scott-Hoy, K. 2003, p.268

163 Ibid, p.269

164 Gardner, H. 1999; Guild, P. and Garger, S. 1998

165 Eisner, E. 1997, p.4

166 Dewey, J. 1934, p.18

> intently at it, seeking answers to the questions that raced through my mind. What background should this body of mine have? Where was I when this thinking was happening? I was in my world. Sometimes because I had to return to Australia, it was my home. Sometimes because distance helped me to see things better, I withdrew to the expatriate's world by choice.[167]

In this example one can see how Scott-Hoy acknowledges the ability for art making to bring about new perspectives. The art making helps to form new questions in the mind and helps to work out and clarify those questions.

Why Choose an Arts-Based Autoethnographic Research Methodology?

In answering the question, I am drawn to a recent personal conversation with Shaun McNiff in which he suggested a particular research method is valuable when one can understand it and it is useful.[168] In addition I consider a research methodology is valuable: when it is true to my philosophy and strengths and is authentic as a representation of the self.

In choosing my research methodology I also consider my answers to questions poised by Hervey.[169] "What is it that you see that others may not even know exists? What can you describe with accuracy that others can barely see? In what forms can you communicate what you have found, that others would be unable to create? What stories,

167 Scott-Hoy, K. 2003

168 McNiff, S. 2004

169 Hervey, L. 2000

images, and truths can you tell that few others have the privilege to witness?"[170] Answers to all of these questions continue to lead me toward an art-based inquiry of research.

Another issue pertinent to my choice of research methodology is the data. The traditional scientific research paradigm relies on the language of words and numbers as exclusive agents of meaning of scientific knowledge.[171] The research questions elicit very different data when collected in a traditional science inquiry of landscapes. The data are the expressions of the researcher and co-participants' experiences in relationship to landscapes and will include images and other forms of artistic expression as well as non-traditional narratives. "The nature of the data very often dictates what tools need to be used to identify, observe, gather, organize, and understand. The wrong tool can completely miss the data in question."[172]

The arts as representation of my experience in landscapes awakened my imagination as well as my sensory and emotional experience, which led to emotional and intuitive data. This kind of data is best expressed through "... stories, symbols, images, postural changes, gestures, and inarticulate sounds: in other words, the raw materials of the arts."[173]

In a recent conversation with Fred Taylor, he suggested that, "The beauty of art-based perceptual ecology is that it offers you a language that is true to the experience. Arts-based autoethnography lets the narrative grow out of that experience and so that the

170 Hervey, L. 2000, p.111

171 Ellis, C. & Bochner, A. 2000: Eisner, E. 1981: Slatttery 2001

172 Hervey, L. 2000, p.112

173 Hervey, L. 2000, p.113

conceptual, the place you get to at the end is really kind of reconstructed from your own narratives rather than imposed on them."[174]

Description of Co-Participants

Data in this research study included the images and personal narratives collected from 14 co-participants. The co-participants ranged in age from 23 to 37 and were graduate students in a 10-month residential program associated with the University of Washington, Seattle called, "Education, Environment, and Community." All co-participants in the research design attended the first ABPE workshop, which I taught as part of their enrollment in a graduate course, "Integrating Arts Into the Curriculum." The first workshop was held in December 2004. All co-participants were Caucasian: four were male and the remainder female.

A second workshop was offered in May 2005 as a follow-up to the first workshop and provided instruction on dialoguing with images and landscapes. Three co-participants attended this workshop. All three co-participants were female: two were in their mid-twenties and the third in her mid-thirties. The two younger women grew up near the location of the research site: the third lived in multiple locations throughout childhood. An in-depth interview with "Ann" in the fall of 2005 can be seen in Appendix H.

174 Taylor, F. (personal communication, 2004)

In working with the co-participants, I followed the IRB Expedited Review process and received oral consent from the co-participants to use their work and their words in the research project. The co-participants were given anonymity and confidentiality through the use of code names.

The limitations of such a research group, it is a large sample. The co-participants background in art and science through formal education and empirical experience was varied. The impact of these variables was impossible to include in this study. That kind of in-depth study will be saved for post-doc work.

Research Design

Recognizing that every method has its limitations, the research was strengthened through triangulation. The triangulation included investigator triangulation and data triangulation.[175] Unique to arts-based autoethnography, the researcher, co-participants, images, and the landscapes were all subjects.

The theoretical element of the research was supported through literature reviews, discussions with the dissertation committee, and other professional colleagues. Following is the research design.

175 Denzin D. and Y. Lincoln, Y. 2000; Patton, M. 2002

Data Collection

Research was conducted at four research sites. As primary investigator I conducted research solo at three of the field sites: Missouri, Arizona, and New Hampshire. At these sites I practiced up to three art-based perceptual ecology exercises in response to the research questions. These included an abstraction exercise, a facsimile, and a shadow drawing exercise.[176] The time spent in the field at each site varied from one day to one week. The field site where research was conducted in collaboration with the co-participants was located in the temperate rainforest of the Pacific Northwest. The researcher, and co-participants investigated the three research questions by practicing a combination of all exercises. An image portfolio was created for each research site.

Throughout the research I took field notes of my observations and thoughts on the learning experience. Staying with the arts-based autoethnography methods, I built upon those notes and developed them into a personal narrative so that they would convey to the reader the meanings I attached to the experience. The intention of the personal narrative as inquiry is that the reader can enter the story and feel a part of it, experiencing what the researcher experienced in that place. Stake calls this "naturalistic generalization."[177] He suggests the reader should be able to feel, to have a vicarious experience of the thing being told. Some of this narrative must be constructed from memory however. Therefore I used

176 Woolery, L.A. 1998

177 Stake, R. 1995

what Ellis calls "emotional recall." When you remember a scene emotionally, this allows you to go back in memory to the scene and remember other details.[178]

The field notes also included a description of the context within which the observations were made and the art process and mediums used at each site. The co-participants were asked to record their experience in narrative, which could take the form of reflective text, a nature journal entry, mind map or poem.

Data Analysis

Data analysis involved playing with the data and recording the play.[179] I interpreted play to mean finding alternative ways in which to perceive and explore the data. In artistic inquiry, the sensory data may not be clearly organized. It may be stored in either the conscious or the unconscious mind of the artist/researcher. Therefore the analysis of such data is a continuous process that cannot be rushed. The data analysis of each site might take place at the moment of investigation or anywhere from one month up to several months. As new data came in from other sites, the analysis could change.

When I returned home from the research site after making images, I would lay the images out in front of me in a configuration similar to the actual research site and practice dialoguing with the images. (See page 35 for description of the dialoguing with images process). The image dialogue was recorded, transcribed and edited, with the text being

178 Ellis, C. 2000. In Ellis, C. and Bochner, A., p.752

179 Booth et. all 1995, p.197

treated as a piece of creative writing for the purpose of achieving the maximum expressive effect. I arranged and rearranged the images like the clues to a mystery with the expectation that this intentional manipulation might reveal patterns not available to me when observing the landscape with my unaided eye.

In the analysis stage I was not concerned with how much new knowledge of ecosystems the co-participants or I constructed: instead I was interested as whether there was a deeper understanding of the landscape achieved by practicing ABPE. As the researcher I responded to the co-participants' personal narratives and images by asking the same questions that I had asked myself in regard to investigating my experience.

These were some of the questions I was asking: Is the art making opening the participant to other ways of knowing landscapes? What is the evidence that tells me that? How is this similar or different from my learning experience practicing ABPE as a way of knowing landscapes? (see Appendix K for the matrix that supports this question and answer process.)

Interpretation and Presentation of Findings

As the artist/researcher I returned again and again to the data to facilitate the process of achieving a valid depiction of the experience through a synthesis of the meanings and the essences of the experience.[180] Field notes from each site were in the form of narratives, poems, descriptive lists, and visual graphic sound maps. I used a

180 Polanyi, M. 1983; Moustakas, C. 1990

combination of these notes to construct more detailed narratives at a later time. The synthesis became a piece of art in itself.

In the process of art making, the artist succumbs to a contemplative state where questions arise. These questions were recorded in the field notes of both researcher and co-participants and can be seen in the Results Chapter. In the interpretation stage I would go back to those notes gathered from the research sites and continue along the same lineage of my questions. In the answers I would find that I drew from both a metaphorical and literal knowing, using a combination of the language of art and the language of ecology.

The images and narratives of the initial fourteen member co-participant group have been analyzed and folded into the dissertation and can be viewed in the Results and Conclusion Chapters. After the second workshop in May 2005 I facilitated a group dialogue with the three co-participants (see Appendix K). In September 2005 I met with one of the co-participants and provided her with a written summary of the outcomes of the research project. At this time she viewed her original images and narratives. Her feedback was recorded in a two-hour interview. (see Appendix H) My interpretation of her interview can be found in the Results Chapter.

The ultimate goal of art-based inquiry is to find meaning in the data and to understand it as a response to the research question.[181] It is in the relationship between

181 Hervey, L.2000

image and artist that response to this goal most clearly arises. Unique to art-based inquiry is that no one beyond the artist can interpret the image they created.

All images created during the data collection were electronically scanned and an electronic portfolio was constructed and backed up on DVD's.

Method of Dialoguing With Images

In the field of art therapy the image is recognized as a participant in the therapeutic process.[182] This practice stems from psychologist Carl Jung's use of what he called the "active imagination."[183] He says this imaginal dialogue "... is based on a deliberate weakening of the conscious mind and its inhibiting effect, which either limits or suppresses the unconscious."[184] Dialoguing with images brings forth information from the subconscious and gives articulation to implicit and tacit knowledge.

The practice of dialoguing with images recognizes that images created in artistic endeavors have something to say, can speak for themselves when encouraged and have ways of influencing those who encourage dialogue.[185] McNiff suggests that when we talk *about* pictures, the ego is in control of the contents of the discussion. When we talk *with* pictures, the artist becomes a co-participant in the dialogue, putting one outside the ego

182 Allen, P. 1995; McNiff, S. 1998; Wadenson, H.1980

183 Jung, C. 1969

184 Jung, C. 1969, p.190

185 McNiff, S. 1992

voice; therefore it is less likely that the dialogue will be reduced to abstract generalizations.[186] (Italics mine).

When the researcher reviews the totality of images made at a particular field site in the context of the site, the process is similar to an ethnographer bringing her descriptions and analyses to the research subject for verification. Internal validity and authenticity of the findings is addressed in this way.

Method of Dialoguing With the Landscape

I developed a practice of dialoguing with the landscape, which is derived from the process of dialoguing with images. The research study is founded on the premise that wisdom is inherent in the natural world, therefore, in the research study: the land is considered a participant. This thinking aligns with modern science, as physics recognizes that all knowing is a participation of the subject in the object.[187] Thus the practice of dialoguing with the landscape recognizes that landscapes have something to say, can speak for themselves when encouraged. These methods of dialoguing with images and landscapes were used in the research design during the data analysis and interpretation stages.

186 McNiff, S. 1992

187 Sloan, D. 1993. In this research study the landscape would be considered the object.

Final Criteria

In the conversation on art as inquiry I consider one final quote. It is recognized that art, as it moves us beyond convention acknowledges: "Imagination is as important as rigor, meanings as important as facts, and the heart as important as the mind."[188]

188 Bochner, A. and Ellis, C. 2003, p.506

CHAPTER 4

Results

In this chapter, the heading for each section is titled FIELD NOTE. Under these sections the data was collected as described in chapter three in response to the three research questions. Each FIELD NOTE section contains images and text reflecting the personal narratives of each researcher in the style of arts-based autoethnography. Interpretation, reflection, and discussion will be addressed in Chapter Five.

Under each FIELD NOTE section, my experience and the experience of others when practicing these methods will be jointly addressed. The data collected in response to the first research question begins on page 71: "How is the practice of ABPE a way of knowing the language of place? The FIELD NOTE section beginning on page 96 explores experiences in response to research question number two: "How does the image created in ABPE reveal the land's stories and lead one to clues of the evolutionary history of the land?" Experiences responding to research question number three will begin on page 116: "Are the patterns discovered in the images meaningful to gaining a deeper understanding of place?"

FIELD NOTE – Hominey Branch, MO

Art-Based Perceptual Ecology As a Way of Knowing the Language of Place.

The wisdom held in place was revealed to me as raw sensation through my exploration and play in landscapes as a child. My story, written in personal narrative, accounts for the six key concepts of art-based perceptual ecology methodology as described in Chapter 1, the Literature Review: direct experience, magic, intuition, imagination, art making and pattern language. The descriptive narrative below, that opens this section is written from memory and was initiated when I returned to the site as an adult to practice ABPE. Following is my story, my experience in landscapes that led to knowing the language of place.

The creeks and rivers in Boone County that form the Missouri watershed hold special meaning to me. It is there that I spent a great deal of time exploring as a child. This region, at the northern edge of the Ozark Mountains, is blessed with springs and spring-fed streams. One particular stream that most often gained my attention ran north along a draw, about a quarter mile to the east of our house. This branch of clear, spring-fed water went unnamed, but it held immense stories of place, as it captured a young girl's imagination growing up in the early 50's.

On hot afternoons, my brother would lead my younger sister and me across the back pasture, through tangled clumps of red fescue to the edge where oak and sycamore grew dense. At this edge our graceful young bodies would discretely undulate through

barbed wire fences and thickets of buck brush and thorny multi floral roses—a hardwood forest in the midst of succession. On through the maze of shagbark hickory, pin oak and black walnut, down a steep westerly facing slope, like players on a chessboard, we chose our steps cautiously.

At times I would go alone, sitting for hours at the swimming hole, my legs dangling over the rock ledge, my toes dipped into the water below sending out ripples that mirrored the patterns of water striders as they skated across the glassine surface. Immersed in deep reverie I was surrounded by jaybirds calling, musty dampness of earth mixed with red cedar, and the dappled light streaming through a thick canopy of deciduous hardwoods. Even in the height of summer, the August heat could not penetrate this dank oasis, as water ran cool across my bare feet.

I would extend my body as far as possible out over the pool, my hands white-knuckled at rock's edge protecting me from my worst fear, being swallowed into this dark abyss of the unknown. Peering underneath the ledge, at the very furthest point where dark green black mud met russet rock crevices fused in black light, my eyes searched for movement. Even as a young girl, I knew the magic held in the darkness beneath the overhanging ledge was the point of juncture, a place where this world and the other world met.

The air that emanated from this dark place was full, a thick musty ooze choked by silt brewing with the fragrance of life. As it filled my nostrils it created a tension in me I could not explain, yet I could not walk away. I fully expected life to come ashore,

walking, crawling, or slithering from the dark oxygen less place, where nature was still busy with experiments.[189] In my early childhood orientation, I was free to explore the land unsupervised by adult constraints at a time when the world was much safer. As a child, I knew this place through direct experience, as I engaged in its dance, its songs, whispers, and cries. My exploration with place allowed me entrance to the unknown, the "mysterious" and "magical" space of the landscape. I was influenced by the shifting patterns in the land as well as the stories of other species including, Missouri box turtles, Dutchman's britches, and Canadian snow geese. These direct experiences in the landscape led me to an intuitive embodied knowing of place.

Forty years later I returned to this site to conduct my doctoral research. As a child, the information that entered through my body was raw, yet I had an intuitive understanding of my connection to the microorganisms evolving in the mud flats. Direct experience in this landscape lent me a heightened awareness and acute sensibility to the animate landscape. There was a wholeness that came from this intuitive knowing of landscapes. As an adult, in order to get in touch with that embodied knowing of place, it was necessary to enter through my art work. I knew there were more worlds to discover at the mouth of the tributary than meets the eye, yet as an adult I found it difficult to speak about my intuitive knowing of place. I chose to practice the abstraction exercise at Hominey Branch as a means to reveal my tacit knowing of this landscape.

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189 Eisley, E. 1957

Now settled in to this once familiar place, I sit on the rock ledge near the little pool of water, my legs tucked under me in a lotus position. I begin by noticing my breath as[190] it enters and then fills my lungs. Slowly, I exhale. I continue this practice for some time being aware of the rise and fall of my chest as it mimics the rhythm of the hand-sized leaves sifting along air currents, crisscrossing open space to the forest floor below. A slight wind picks-up in the canopy overhead and the dry leaves of elm and sycamore begin to shimmer in the fall light.

By slowing my pace, I begin to notice details in the surrounding landscape. I open my art journal and begin to draw using 2H and 2B drawing pencils. Today I chose to use both hard and soft leads in order to get a good range of contrasting grays.

My first drawing (see Figure 2) is a realistic depiction of what I see directly in front of me. In Drawing on the Right Side of the Brain, realistic drawing is defined as "the ability to see and draw some object or subject in the real world with a high degree of similarity to the observed image."[191] My naturalist illustration depicts foliage: lie of the land, light and shadow, the essential components of this visual landscape. I take a graphite pencil and add depth and detail, shading in around the dark side of the tree, which brings out fine detail of the lacy texture of the deteriorated leaf. I stop drawing as I sense a discomfort in my gut in response to my work.

I move the drawing at a distance, positioning it between the rock ledge and me. In viewing the drawing I am left without emotion. It is an accurate account of my visual

190 Edwards, B. 1979

192. Ibid.

observation of the landscape, but it said nothing of the communication between or within me and the flesh of the land, the inter-species communication of this landscape.

Figure 2. *A simple pencil drawing of the ledge along the tributary of Hominey Branch supports a naturalist view.*

I begin again. With the original drawing situated between the shale ledge and me, I open my journal to a new page and start a new drawing. This time I focus my attention on a select portion of my visual field, the rock ledge and the space beneath it. I intentionally abstract the image.

In the abstraction exercise, (see Figure 3) details are eliminated, patterns are teased out and extenuated, hard edges are softened, and colors are manipulated and transformed into light and shadow. I abstract the ledge by considering it as one element in the full view

of the ecological landscape before me. Using this method of deconstruction, I am able to consider each object's relevance and relationship to the object situated next to it. In this method of information gathering I don't get caught in the natural tendency to stay within the cultural constructs I have been taught; instead I let go of the need to classify and name these objects through the traditional Western classification system.

Figure 3. *In the image created in the abstract drawing exercise I no longer recognize the familiar, instead I shift the focus of my view and the subject takes on new associations and new meaning. Moving beyond what I literally see, the abstraction process reveals the layers and levels of complexity in this riparian ecosystem. A new view of the world has opened to me.*

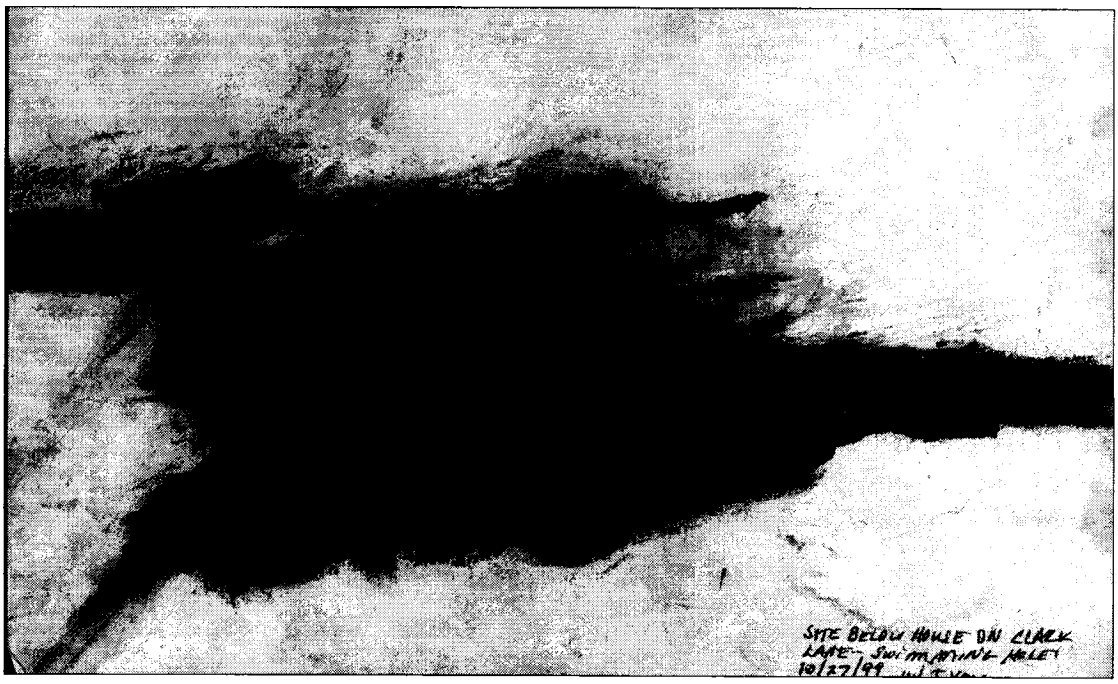

Figure 4. *On my journal page I draw the ledge as form and shape, color and line, primary design elements found in nature.*

If I look at the concept of deconstruction from an ecological system's view, the breaking down of the whole into parts, the parts and whole become object and relationships. So the limestone ledge becomes the object in relationship with the hydrological cycle imbedded in a larger network known as the riparian ecosystem. By deconstructing the network in this way, through the ABPE art abstraction process, I am exploring place at multiple scales (see Figure 4). Fritjof Capra tells us "...the web of life consists of networks within networks. At each scale the nodes of the network reveal themselves as smaller networks."[192]

192 Capra, F. 1996, p..35

In the abstraction process, each time I make a new image, I eliminate the details of the view before me and instead focus my attention on shape, form, color, line, light and dark, value, and pattern. Focusing on light and dark, shape and form, I am able to consider the dynamics of the relationship created between objects. The ABPE mediates a shift in my awareness. The deconstruction process cuts away all preconceived notions and cultural "shadows" or constructs opening me to the magical space where the land and all animate beings converse.

In Figure 5, the geological cycle becomes a thick horizontal plane of rich color, the view into the hydrological cycle can be seen as a translucent gray wash stretching toward a dark organic shape, the nitrogen cycle can be seen as layers of alternating browns depicting coagulating leaves, and a view of gaseous cycles can be seen in jagged floating edges on the back of the horizon, microorganisms multiplying. The decaying body of the sparrow evolved on its own over time as I worked on the collage, it was an unconscious act that came about in the image making process. The image provided meaning to my experience and a deeper understanding to the wholeness of this system, a riparian stream ecosystem along the Missouri River watershed.

Figure 5. *In the abstraction exercise when using the medium of collage, the image speaks through the language of symbol and metaphor. The image speaks of the cycles found in this riparian ecosystem. Notice how the decomposing life in the foreground is a visual narrative of the mixture of coagulating leaves and debris, decomposers busily working on the decaying body of a sparrow, an example of the nitrogen cycle at work.*

I began the drawing exercise by recording what my eyes saw in front of me (see Figure 2). But what my eyes saw and what I drew in the naturalistic illustration, which was an explicit view of the landscape, is not congruent with what I felt and was experiencing viscerally. So I looked and looked again at my subject, the riparian ecosystem, and drew with more abstraction (see Figures 3-5). It was then that I began to really "see," beyond what my eyes were recording. The final image (see Figure 5) was a translation of what I was experiencing, the felt sense of the magic and mystery of place.

FIELD NOTE – Santa Cruz River, AZ

In the following Field Note I will explore the importance of imagination as an interpretation of the natural world. What I came to know was that raw sensation from direct experiences in the natural world was fodder for developing a rich imagination. I suggest imagination lends a temporal exploration, allowing one to see the past, present, and future of that landscape and thus knowing multiple dimensions of that landscape unavailable through "sight" alone. Coupling direct experience in the natural world with ABPE practices and imagination offers a heightened awareness to the way things must have been and allows one to speculate on how environmental conditions may factor changes in the landscape over time. The descriptive narrative below is written from a combination of field notes written when collecting data and narrative written from memory after leaving the site.

Every March I come to this riverbed situated in the semiarid basin and range country of southeastern Arizona. This area, referred to as the borderlands, was once known for its native riparian vegetation. In the 1800's massive altering of the landscape occurred due to overgrazing and cutting of trees, followed by unprecedented floods in 1886. These compounded events caused the vegetation to change. Today only a handful of Freemont cottonwoods stand along the river basin edged by a few mesquite trees that have found refuge in this degraded grassland.[193] My continued investigation of this landscape over time has allowed me a unique perspective of the changes that can occur from both natural and man-made causes.

Eight red-tailed hawks fly overhead. Wings spread wide; they glide along late spring air currents in a downward spiraling formation. Directed by one lead hawk, seven graceful bodies follow, aviating through the clear desert air in a liquid dance of flight. The lead changes and the synchronized group are directed toward mounting flight in a counter clockwise spiral. While ascending, they are at times no more than a feather's distance from one another. As they gain elevation in their upward climb, they are provided with a new perspective of the surrounding river basin.

I have been following this particular hawk family for seven years. It is unusual to see more than the original pair and there have been times when I have visited their diminished habitat to find no signs of them. Today, I observe two pairs of gray hawks or adolescent red-tails, I can't be sure. The immature hawks show no visible signs of red

193 Bahre, C. 1991

coloring and their body size is much smaller than the red-tail adults with which I am familiar. But it is mating season and I am elated to see a multi-generational, perhaps multi-species community. I sit in the sandy bottom of the Santa Cruz riverbed as if in a bowl, edged by the 10,000 year old sedentary rocks. The names of these formations are sweet and lush on my tongue-- Patagonia, San Cayetano, Santa Rita, and Chiricahua. The view is expansive, 360 degrees, encompassing a history of plant, animal, and human species unencumbered by manmade borders.

In front of me stands a Freemont cottonwood, home to this family of hawks. In talking with a local member of the community, I learn that the tree is over one hundred years old. As I look up into the overhead canopy of its graceful swirls of gnarled limbs, my 5' 6" figure is dwarfed by the tree's height and size. The fully outstretched arms of five people would not be enough to encompass its base.

I have watched the health of this ecosystem deteriorate over time. The sight of this proud Freemont cottonwood is a stark contrast to the view on either side. I use a multi-media approach and draw the view, a combination of the literal and the metaphorical (see Figure 6). Downed cottonwood trunks strewn like carcasses along the river's bank, convey a morose feeling of death and decay. Whole bodies are left to rot, resembling the mammoth carcasses of African elephants destroyed for their ivory tusks. Like bones scattered across the landscape, femur, tibia, so too lay the broken limbs of the cottonwood in various stages

of decomposition piled high on top of one another. Bark hangs like death ribbons, frail and discolored, its interior etched with the wobbling shallow trail that echoes the distant travels of a bark beetle once in a commensalistic relationship with this host. Everywhere laid these discarded skins of the giant cottonwood elders.

Figure 6. *Ancient ones lie at the base of this Freemont Cottonwood tree.*

As my observation of this landscape continues, I look up from the bones and see pure white cumulus clouds leaving patterns with wispy edges like frayed eyelet lace against a canvas of turquoise blue. The sky seems higher in this vast landscape. The sun appears higher still. A storm threatens in a bulkhead to the north and west. The bulkhead stands upright, a partition on the cloud's southernmost face creating resistance to the pressure building toward a torrential cloudburst. This skyward tip of cloud, backlit by sunlight, is a bold contrast to the dark abyss of the cloud's underbelly where thunder begins to form.

We know thunder best by its sound, but I wonder does thunder have a shape and color? How does it communicate to those who may be deaf to its sound (see Figure 7)? My eyes return to the sky, an endless stretch of turquoise and white. I sense a foreboding presence rapidly gaining on me from behind. Triggered by some primordial cue, before the rains hit, mesquite, paloverde, leaf litter, packed earth; all release their scented oils. In contrast to the ominous presence of the storm, my nostrils fill with the sweet smell of wet earth dampened after months of dry heat.

I turn and look. Affirming my sense of danger, I see one feverish dark cloud stretching toward the Patagonia range. A transparent blue-gray film is released from its belly forming a continuous loop of liquid connecting earth to sky and sky to earth. I am uncertain as to where the rain begins and ends. I feel an electric sensation traveling along the length of my outer skin, raising the hair on my arms, while simultaneously sending a clammy perspiration down the narrow of my spine.

All becomes still in the landscape. Movement and sound cease. Then, the ground shakes. The sharp detonation from the first warning sound registers full, pulsing vibrations against the inner edges of my being. The thunder gains further momentum. The volume is voluptuous and full, encapsulating a wide breadth of space. Sound is somersaulting over sound, rolling full body, and releasing the pressure that has been building since the storm's beginning.

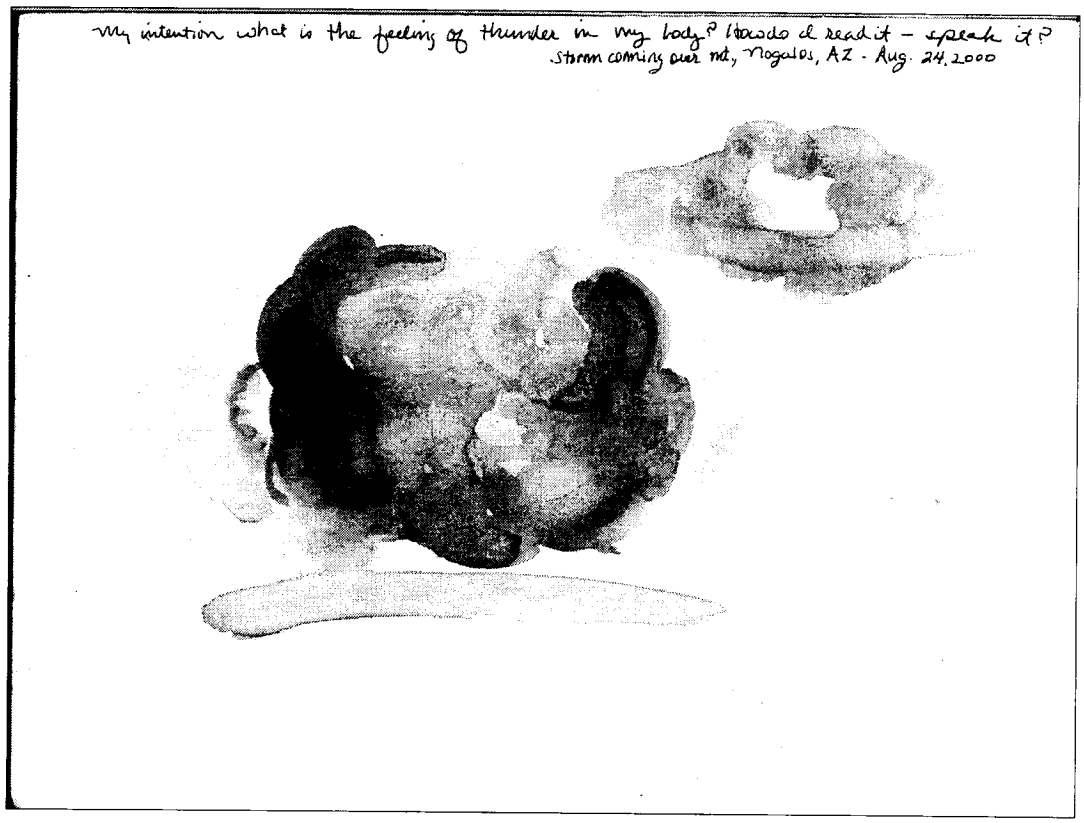

Figure 7. *The image becomes a symbol of where I felt the sound of thunder in my body. I feel the sensation of thunder in my pelvis, the place where the land meets the body.*

Another rumble from the north and west compounds the tremor I first felt in my body, its origin the ground below me. As soon as the thunder releases, eight hawks charge toward the sky directly above me. Wind teases at my hair and the temperature cools. A spiraling dance of red-tailed hawks ascends upward on air currents freshly supplied by the spring storm.

My eyes turn skyward as the sound of the female hawk calls out to the male. I am struck by the forms of shifting clouds and their endless shades of white-- bone white, ghost white, white knuckle, dove white. Now my eyes are cast downward; I follow the clouds skirting shadows across the dry landscape. This perceptual exercise provides dimensionality to my sight: deep rouge red arroyos, dusty sage green mesquite branches, and provocative orange nipples of flowering ocotillo. By shifting my visual focus, I exchange figure for ground and background to foreground. When I merge these two fields of vision I perceive a depth to the landscape that was previously unnoticeable. In this one visual scan I have juxtaposed multiple scales in the landscape, shifting from micro to macro and foreground to background, allowing me to travel through multiple spatial dimensions of this landscape.

As my eyes scan the mountainside, I am aware of converging drainage patterns, alluvial fans and bajadas that over time have shaped this basin and range topography. Earlier, I walked down from this mountain exploring the subtle curves of each micro-drainage as it made its way to the dry riverbed of the Santa Cruz. In front of me is the dry parched earth of the riverbed. In my imagination I can travel back through time and view a

lush riparian system, where giant Freemont cottonwoods once grew providing nutrients for acres of diverse flora and fauna.

I practice using my imagination to explore one micro view of this world. Standing directly in front of the ocotillo, in my imagination, I trace the path of a single water droplet along the thin oblong shape of the ocotillo's leaf following the pattern as it converges into a thousand tiny rivulets that flow into a stream down the thorny edge of the ocotillo stem into the drainage of the dry gulch.

Suddenly the dry gulch fills with the flash flood of the monsoon season bringing much needed moisture to this region. The desert floor softens and thousands of tiny seedlings respond to the release of energy.

In my imagination I can see the desert floor filled with the color and texture of devil's claw, bloodroot amaranth, and paloverde. In my imagination I can speculate on the future of this landscape as I acknowledge sufficient energy in this system that allows plants to become potential food for insects and other leaf-eating animals. In this storyline, Cachora, antelope jackrabbits, and red-tail hawk respond to this abundance of nutrients with greater abundance as producers and consumers that coexist in this gradient.

A butterfly, mariposa in Spanish, crosses my field of vision. I observe its shadow, which appears as a negative space in the landscape, the background of my visual field. The movement of the shadow cuts through the desert stillness. The sun choreographs a dance of fluidity as the butterfly's shadow bends and dips over hardened ripples of sand in the dry riverbed. Clouds block the sun's brilliance and the shadow of the dancing

mariposa is lost. Searching to recover the shadow, I return to the foreground of my visual field and again I notice the yellow and black patterns on wings gliding across low lying mesquite, creosote bush, and Lehmann Lovegrass.

In the desert the mariposa's movement, recorded as a shadow on the desert floor, intrigues me. In this place I begin to practice an ABPE exercise I will refer to as the shadow exercise. I choose the creosote bush as my subject for this exercise, an evergreen shrub that has great significance both ecologically and culturally in this area. Its leaves are small, dark green and resinous, borne mostly at the tips of twigs. This drought-tolerant perennial plant sends its branches 3 to 6 ft. high above the dry desert floor allowing me ample room to work beneath it. The storm has passed and the sun is now high in the afternoon sky providing a superb shadow. I open my journal directly underneath the plant, making sure that the shadow only registers on approximately 1/5th of the bottom of the page. I trace the outline of the shadow as it is cast onto the page. I use a felt tip marker so that I can create a mark at least 1/16" wide.

As I draw I am careful to get as much detail as possible (see Figures 8,9,10,11,12,13). I am not as concerned with the aesthetic appearance of the drawing as I am in recording an accurate measurement of the shadows placement on the page. Every five minutes during a 20-minute timeframe I turn to the next page in my journal, being careful not to move the journal's original position. I trace the outline of the plant's shadow. In this practice, I focus my awareness and give my full attention to this place, opening myself once to embodied intuitive knowing of place. As I record the new

information I notice how over time the shadow moves up and across the top of the page. Once I finish the exercise, I flip back through the pages of my journal. I am astounded at the rapid movement of the shadow as it ascends across the page.

In this exercise I have taken one frame of the earth's process and fixed it in time. Making art in this intentional way is integral to and causes me to slow my pace. This allows me to be more present in the moment, enabling me to notice detail that I otherwise would not see. Making art, I am transformed from viewer to active participant. Here, within this one desert landscape, I have explored many aspects of dimensionality, which open me to a vocabulary of place. The image is the language, the visual narrative of the land's story.

Figure 8.

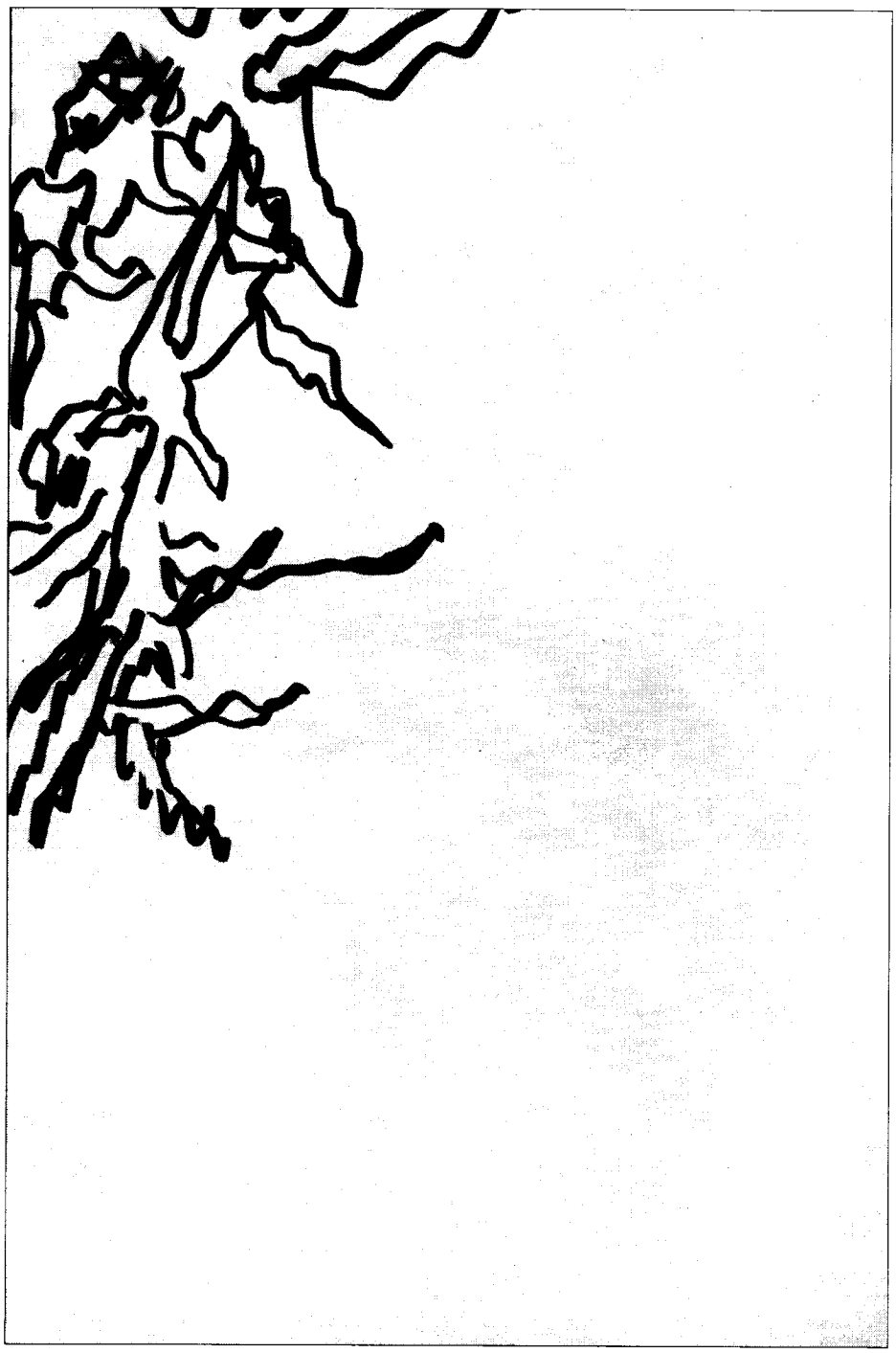

Figure 9.

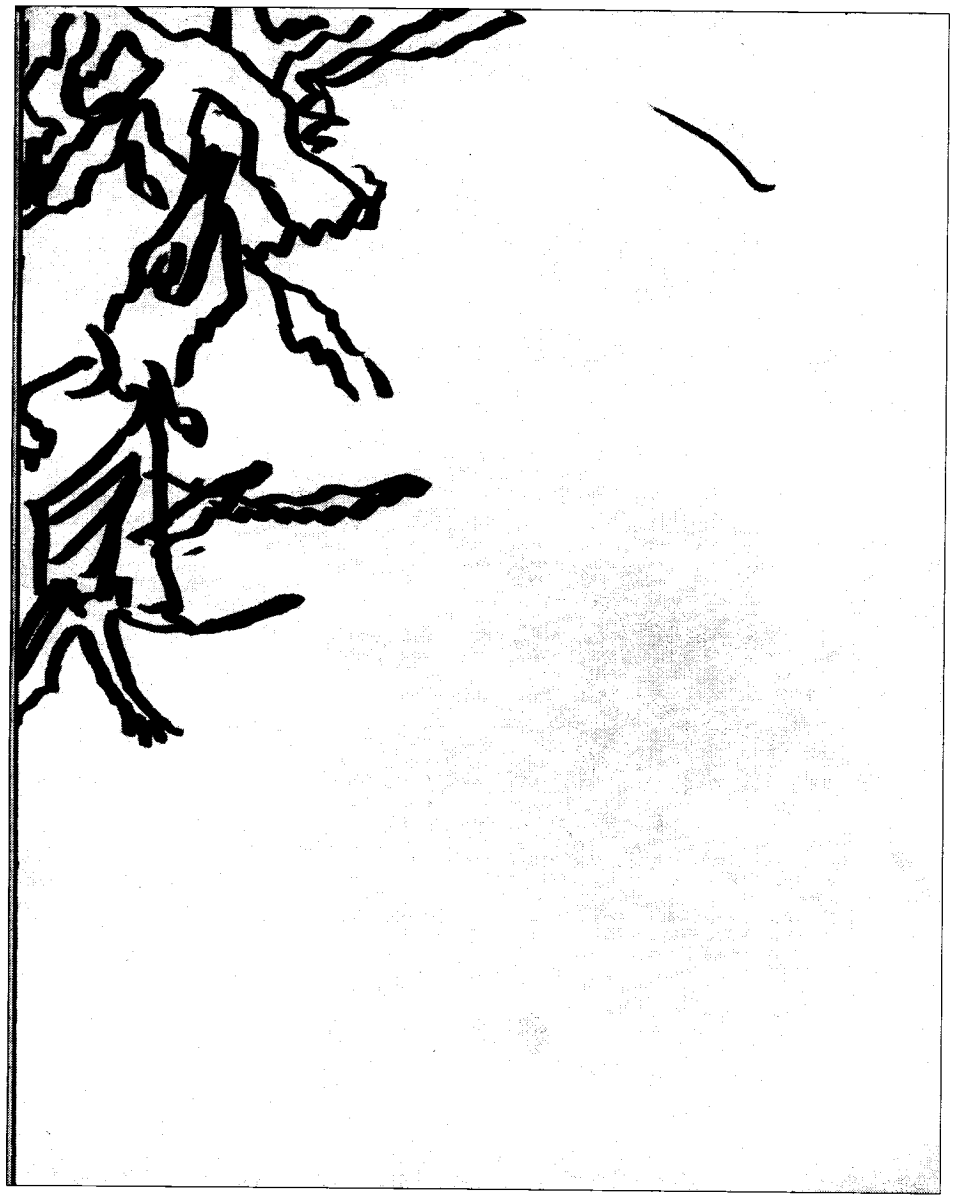

Figure 10.

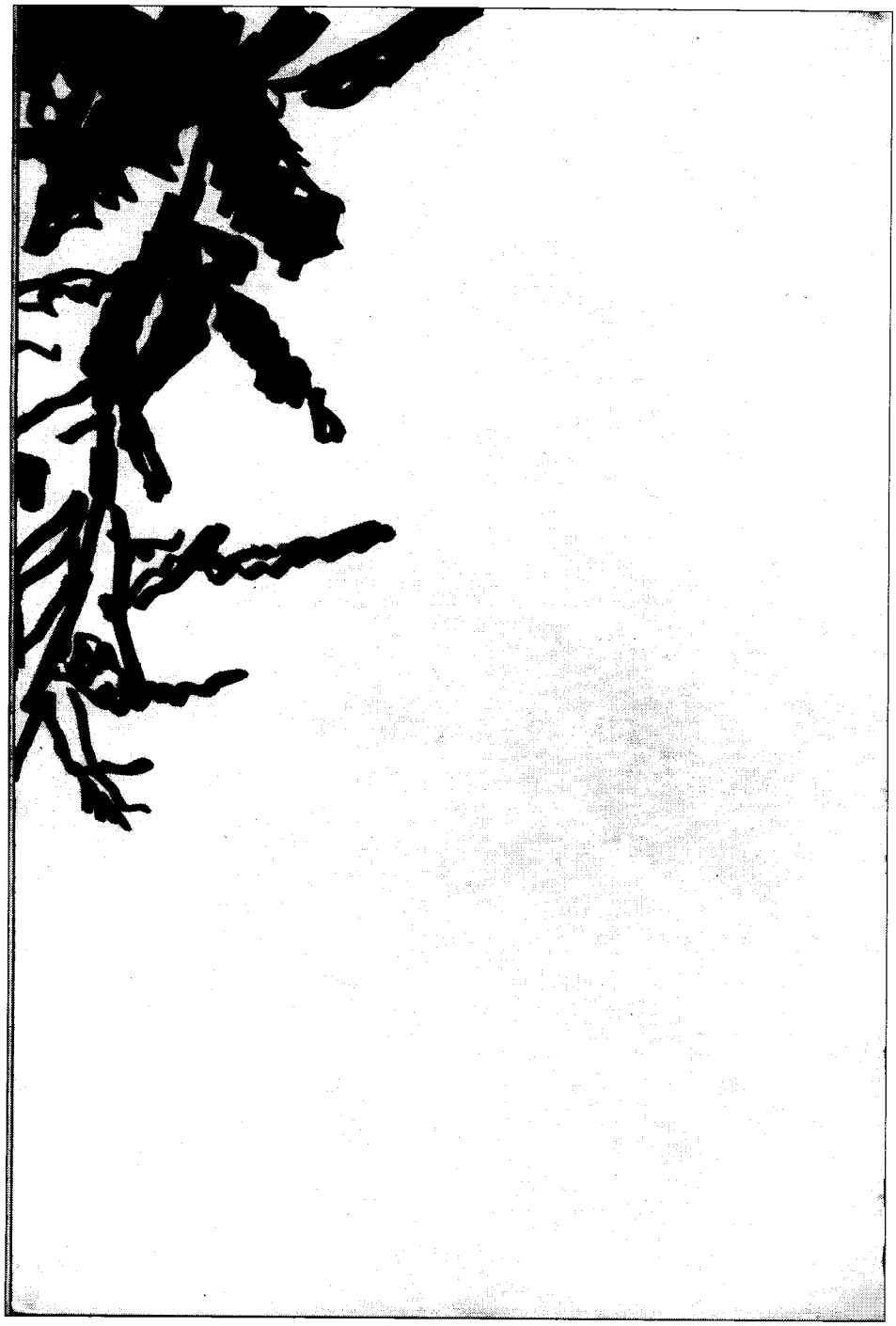

Figure 11.

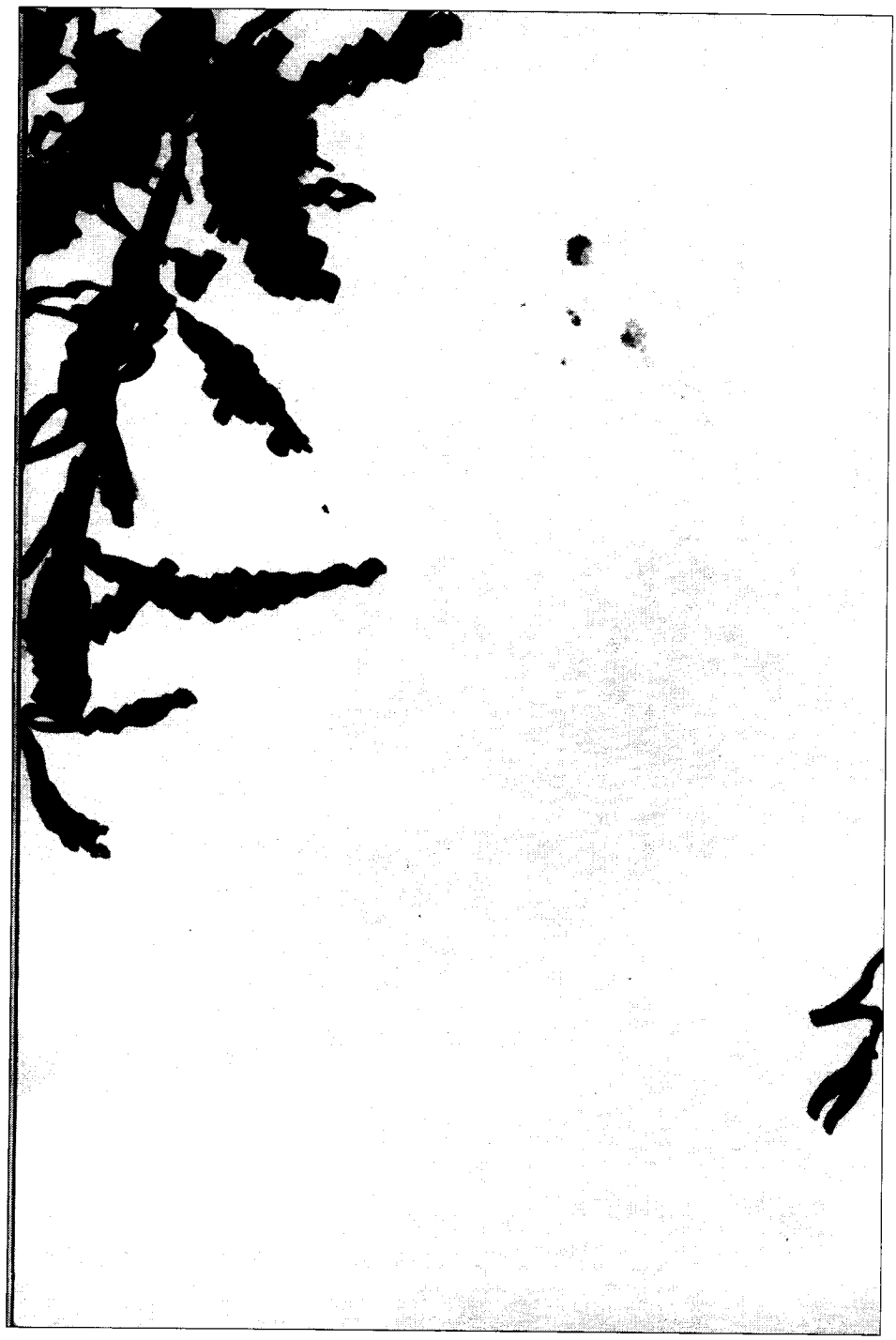

Figure 12.

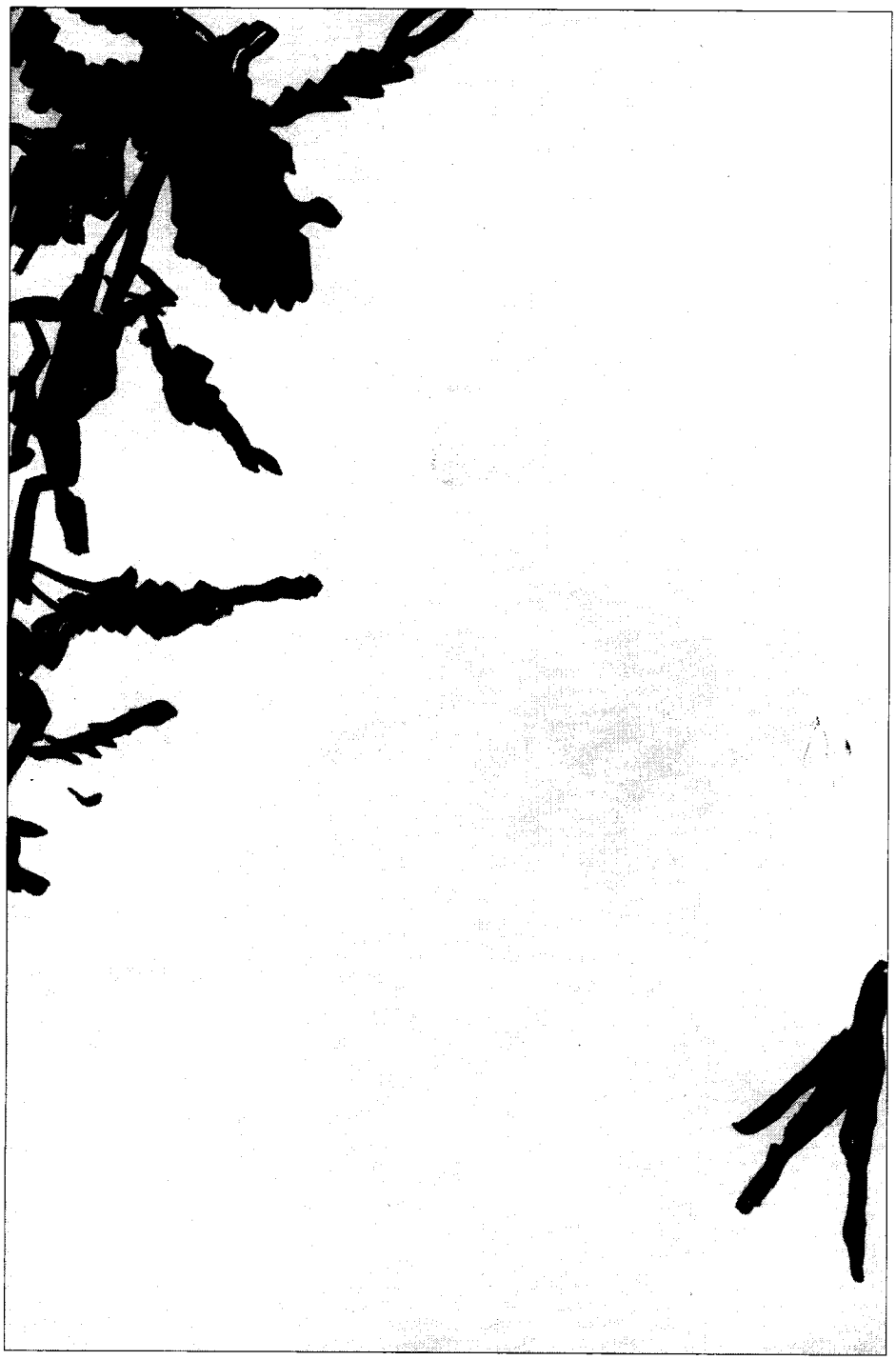

Figure 13.

FIELD NOTE – Bainbridge Island, WA

"Ann's" Exploration of the ABPE Abstraction Exercise and Dialoguing With the Landscape

The forests of the Pacific Northwest region of the United States are called moderate temperate rainforest. They are distinguished by their abundance of evergreens, western red cedar, Douglas fir, and western hemlock. We recognize the forests of the Pacific Northwest by their complex structure, multiple canopy layers, wide range of tree sizes and ages and the abundance of epiphytes such as lichens, mosses and ferns. Old growth forests are the final stage of a forest development. Few old growth forests remain. Disturbances in forest structure occur from both natural (wind and fire) and human. Humans have occupied the Pacific Northwest for thousands of years. Archaeological records suggest people have been in this region since the retreat of the last glaciers, some 10,000 to 14,000 years ago. Thus disturbance in forest systems due to humans can be expected. The area has been logged at least three times over the last thirty-five years. This is a habitat in the midst of succession.

On a cold overcast December day, the 14 co-participants and I explored the research site, an elevated sink in the denuded forest system of the Pacific Northwest. Together we entered the opening to the site. I ask the co-participants to choose a place to sit or let the place choose them. They began to circle the pool of water, entering from each side. The far side of the glen was still difficult to maneuver due to the tangle in the under

story. Entering from that side one would find it thick with cedars, firs and salal. The co-participants were given two tasks: to record their description of this place in words or images at some point during their four-hour observation time. They were also given instructions for the abstraction exercise and asked to practice the art making as the primary task while at the site. In their description of the site they could choose a narrative approach, poetry, or word list.

"Ann" chose the Western red cedar as the subject of her view focusing at the understory and mid-canopy range. Her images (see Figures 14-19) depict how she was able to deconstruct or peel away layers of the ecosystem through the abstraction exercise.

In her narrative, "Ann" spoke about her familiarity of the site, its plants and processes. For "Ann", the site brought back memories of her childhood experiences, recognizing it as just such a place she would have played as a child.

> *I glanced over this way when we were walking in. I instantly recognized it as a place I would choose to play as a child. It is very similar to the different places I would play as a child. When I sat down on the bed of dried cedar leaves, I could feel them and their scratchy texture against my bare skin (especially down my backside) without ever touching them.*

Figure 14. *"Ann" first drew in the naturalist style using a graphite pencil as her medium of choice. She was able to capture species composition, light, and spatial qualities of this landscape.*

Choosing metaphor and poetry as her style of narrative, "Ann" experiences the site through her senses.

Morning sunlight filtering in
A fortress, safe, tucked away looking out not looking in
Canopy of sword ferns
Smells of cedar leaves—whiffs of sweet cedar find my nose
Orange carpet
Airplanes above, not jets but propeller style
Mossy logs lying still, cemented to the ground but soft as a mattress, a mattress filled with life
Light greens, dark greens, and dead greens—yellow and brown

Tangle of cedar branches growing from a massive clump of small round cedars—which will win in the race for growth?
Lots of babies begin to appear—wood fern, hemlock, red huckleberry
Twinkle of wetness, resting on the life of the forest
It is a transitional place, half cedars, half alders, open and closed, light and dark
Nooks and crannies, rooms of a house—a miniature world to be discovered.

In Figures 15 and 16, "Ann" changes to a color medium. These two images begin to define the first levels of the abstraction process. As one image follows another, we begin to see "Ann" simplify her visual field.

Figure 15. *Next* "Ann" *used watercolor and watercolor pencils as her medium of choice capturing color, light and spatial qualities of the landscape. She practiced a much more painterly method, playing and experimenting with the medium.*

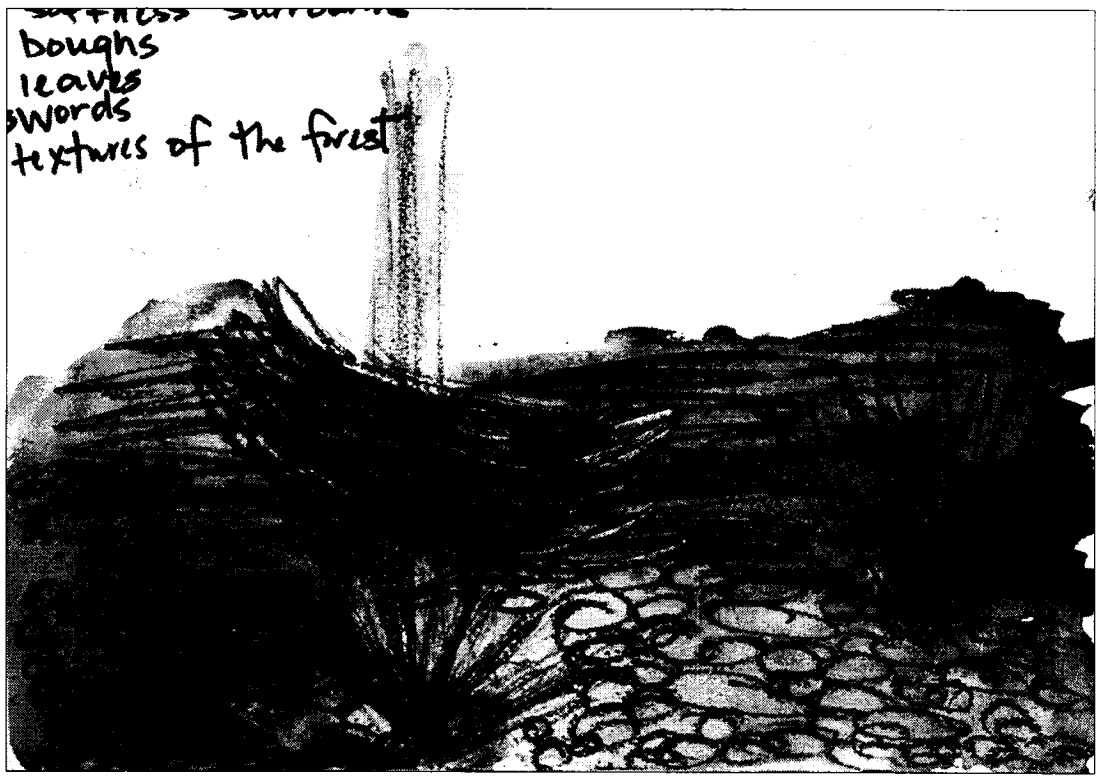

Figure 16. *Continuing to choose a color palette, "Ann" began to abstract the shapes and forms she saw in her field of vision.*

In her next 2 drawings (see Figures 17 & 18), "Ann" used a rapidiograph and black felt-tip pen to further simplify—in B&W— the subject of her view. "Ann" practiced the abstraction exercise as a way to concentrate on the gestalt of her subject. The elimination of color allowed "Ann" to bring only certain elements to the forefront of her awareness, such as the shape and form of the prominent Umwelt. By shifting her field of vision, she was able to focus on the gestures of the Western red cedar, the J.

In her narrative "Ann" used simile and metaphor to find meaning in the shape of the J, metaphorically speaking of it as a backbone. Here she takes seemingly unrelated subjects and through their juxtaposition produces a new semantic relationship; "limbs like

backbones, branches like ribs." "Ann" pushed the abstraction exercise further than other students by continuously deconstructing the subject of her view as seen in the final B&W drawing (see Figure 18). In her image, the ecosystem is reduced to simple forms and shapes.

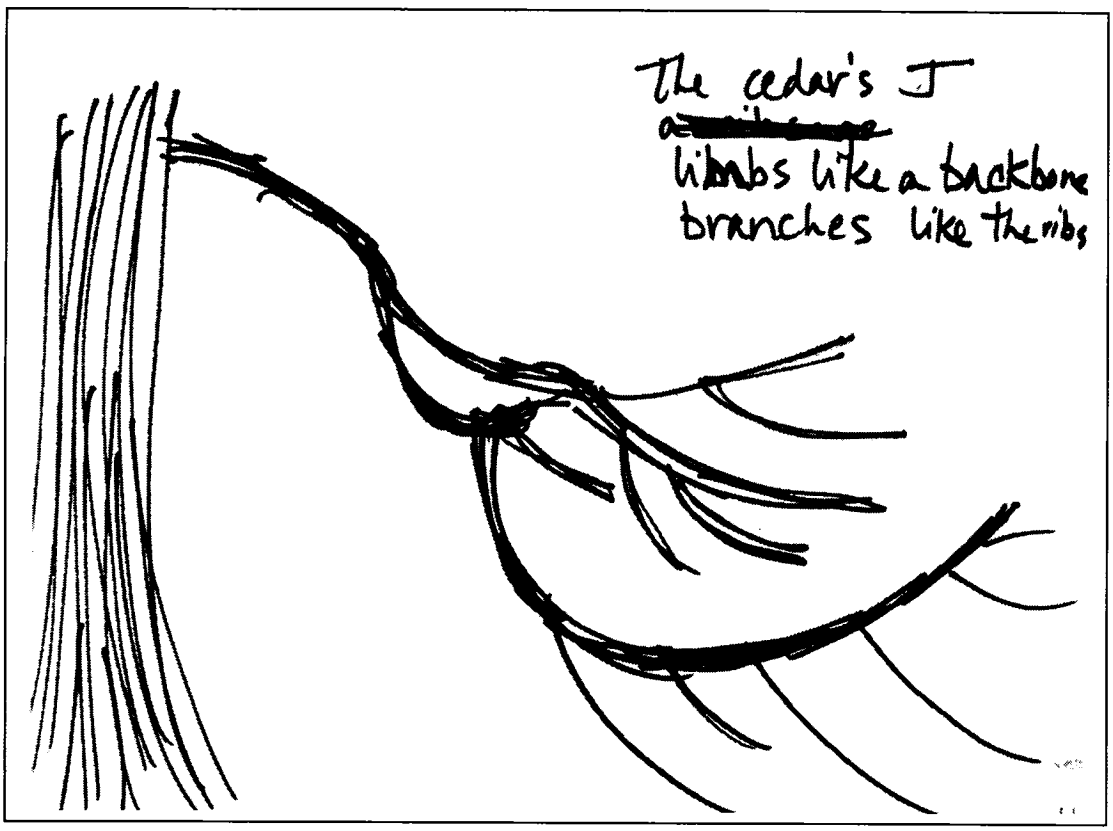

Figure 17. *In this drawing, "Ann" emphasizes the J shape found in a cedar limb, a notable gesture of all western red cedars.*

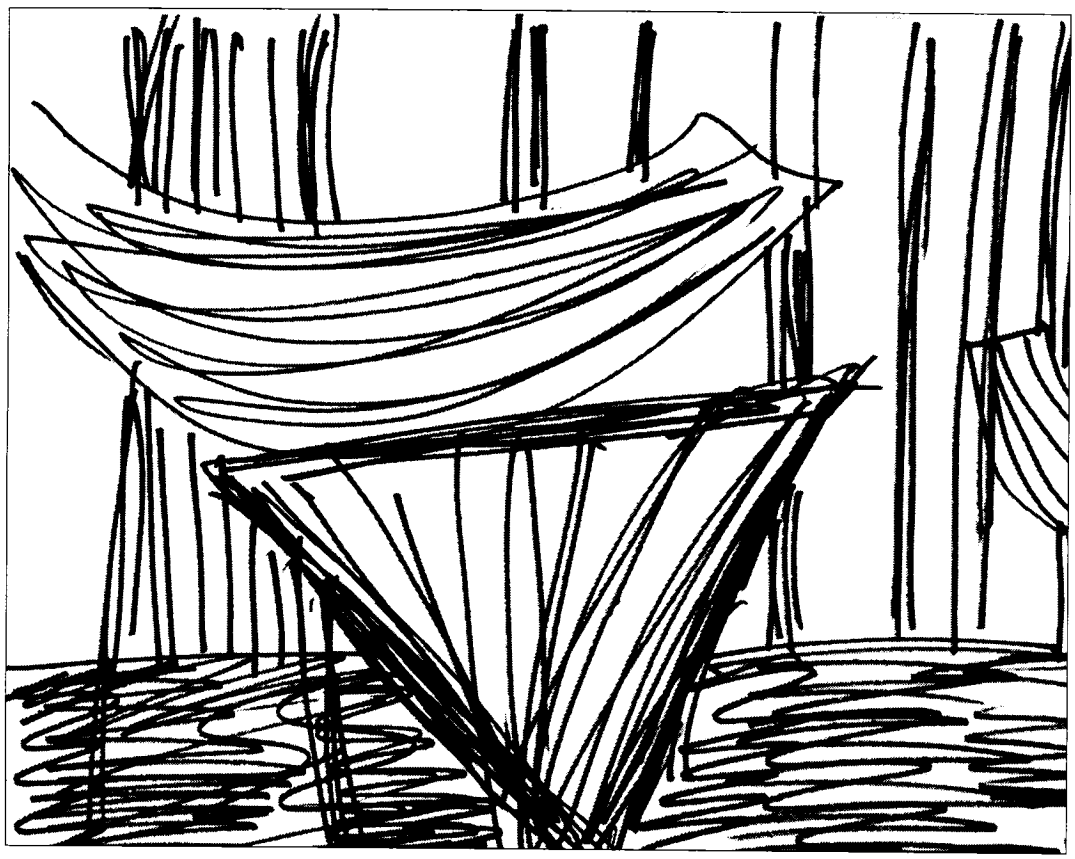

Figure 18. *By deconstructing the subject,* "Ann" *moved beyond what she literally saw. The process provided her with a perspective of the multiple dimensions of this temperate rainforest ecosystem that was not available to her when she first entered the site.*

In the month of May of the following year, three of the co-participants and I returned to the research site. I instructed them in the practice of dialoguing with images and landscapes. Below is "Ann's" dialogue with first herself and then with specific subjects within the landscape.

Dialoguing With the Landscape – "Ann's" Dialogue With Self

Luscious green brilliant color. The array of greens is amazing. My protected spot is still dark but the window out is bright and fresh. The sun is shining like it was on that cold December day but it is different. The whites and grays of the Alder back are no longer in the light like the center of the stage. Instead the green leaves are captured by the light and the Alder trunks are the columns holding up the "actors."

What I notice about this place – my eyes go right back to the log, the horizontal snag in the vertical forest. It is greener with moss compared to 5 months ago but the form is still strong. I also see a branch on a cedar. I studied this branch before and its shape is still intriguing to me. I see ribs from a spine; the gentle swoop holds the aura of the strong cedar. Yes! It is like the words the cedar cannot speak are pronounced by the shape of its boughs and delicate leaves.

The wind gusts! It tells me that I am small and it is powerful. I know I chose this place because I am protected. The alders around are young compared to the cedars. They are tall and brittle; they don't know how the wind can be dangerous to them and me. When their branches fall they can harm.

My big cedar barely moves in the wind. Under it, I am safe from falling branches. It is big and wise and stands tall, protecting the understory of young salal and fern and me.

Dialoguing With the Landscape –"Ann's" Dialogue With the Horizontal Snag in the Forest

"Ann" -- What can you tell me today?

Landscape -- I stay unchanged while across the pond the alders change daily – growing leaves, losing branches, moving, swaying, and growing lichen. I stay in my place, cemented to the log, one day I will move but it will be only to fall down. Once the friends inside me do their work, I will fall down to the ground into another phase of my life.

As I stay in my place I enjoy the protection I have from the elements. The cedars and one hemlock protect me. I am inviting to the green mosses that live upon my wood. I have a use to them but I am just waiting to fall.
"Ann" -- What do you see from your place?

Landscape -- I see change. I see bright greens fill this place. I see the sun come and go. I see the branches from the hemlock above me stay their brown color. I see the understory grow lush and full. I see change everyday but not with myself.

"Ann" -- is this like me not feeling like I am changing while I see everyone else around me change? Really I am changing and growing but it is so slow and normal that I don't notice it.

Dialoguing With the Landscape – "Ann's" Dialogue with the New Salal Leaf

"Ann" -- What can you tell me today?

Landscape -- It is glorious to be here. I want to stay forever. I am surrounded by friends who are doing the same thing I am but we are also racing to be the tallest and best. Some are doing better, they are taller, some are more separated from the group, and they are smaller. We are young and fresh and tender. We don't know what cold winters are like. We are nervous to find out what will come in the future months.

Dialoguing With the Landscape – "Ann's" Dialogue With Cedar Branches, New Ferns and Salal

Landscape -- Every year I (cedar) am left alone through the winter. Every spring I am joined by new neighbors who come for the spring and summer. Some of these friends survive with me through the winter, most die and fall. I am a constant. I will welcome new friends and will be sad to see them go. I am okay alone. I am fuller with friends.

"Ann" -- I get goose bumps when the rain begins to fall; a chill runs through my body. The sky gets dark and I want to be inside warm and snug. Everything smells fresh and clean which I like but I want to be in a house by a fire away from the dark rainy outside. I love it but I want to be protected from it. I am not cold but I still get the shivers. It's an instinct I think.

The rain and wind, I can't tell the sounds apart. They whoosh; I see the droplets fall on the leaves of plants. The sound takes me back to my childhood. I hear it and I want to go in but sometimes I can't because I am too far away from my home. I love my cedar overhead. The rain pours but only a few drops fall on

me. I am protected. The shivers don't go away. I continually feel them in my body. There is something very instinctual in me. I want to find shelter. I want to be in a place where I am away.

FIELD NOTE – Bainbridge Island, WA

The Collective Voices of 14 Co-participant's as They Learn the Ecological Vernacular of Place Through the Senses

Ecological vernacular could be considered the native language that is spoken between and within species that reside in a particular locality. The "earthly utterance" [194] of this language includes the angular shapes of the shale ledge, the graceful arc of the barn swallow as it swoops on air currents over a Missouri river, the conversational curtains of bird song partially opened in a temperate rainforest; all are meaningful expressions of the land. How do our senses help us to define these qualitative dimensions of the landscape?

Following is an edited collection of the co-participants' experiences in the landscape through their full body engagement with the patterns and gestures of this place. The outcome is a sensory narrative of the place spoken through the ecological vernacular. We actually experience the landscape through an overlapping sensory exploration, known as synthesesia. In order for the reader to really "hear, to smell, to touch" the multitude of voices in this symphony, I have chosen to separate out each sense observation much like a musician would find his/her musical score separated out for their particular instrument.

194 Abram, D. 1996

I listen to sound – the sounds of water escaping, rustling and rushing, heading onward toward recapitulation. Bird's song providing musical chirps, reverberating and crisp. Conversational curtains—partially open as they twit and dance, their sound frayed at the edges. It is quiet here, but not silent: leaves and needles fall gently after a small gust and the soft tapping on branches and needles tells the path of the falling. Automobile and plane sounds threaten and obscure.

My nose recognizes smells – Cold air. Chill reaches the end of my nose. Cold moves through my fingers into my hand. I smell the damp earth absorbing nutrients. Who knows where soil begins in this place.

I see – light weaving in and out of the ends of the organic matter. Spotlight-right eye, pores shining, eyeball blurring. Bright blue sky, uninhibited, awake, makes this a day to be alive. The floor a mixture of sienna and dark brown maple leaves in the process of decaying. A twinkle of wetness, resting on the life of the forest.

I feel – My foot sinks with every step in a ground laden with water unlike the sword fern, grounded and steadfast. Their layers a well-padded carpet underneath my feet. Already the day is getting ready to go to bed. As if in a fortress, safe, tucked away under a canopy of sword ferns above a carpet of orange.

"Bill's" Experience of the Magic or Multiple Dimensions of the Landscape

When we are free to explore the mysteries of the natural world unencumbered by the perceptual logic of the culture, often the multi-dimensional landscape reveals itself through a tacit knowing. In the literature review, I refer to the multiple dimensions of landscapes as magical space. "Bill" speaks of his awareness of experiencing the "magic" through his metaphorical use of language in his written work. Upon entering the landscape his attention was drawn to a snag left at the edge of the pool of water. He created many images of this old stump and came to one final color image (see Figure 19). "Bill" first described his experience through a written narrative and later through poetry.

I sat on a mossy log looking out over the water, a small wetland in winter, dark green with a crisp coolness. A small drop of water, poised above the snag, refracted the colors of the rainbow in my eye. Gravity was doing its best to pull down my little water droplet but it clung to the lush moss with all the energy it possessed and I loved it for its struggle. I focused on just the branch, moss and the water droplet and I noticed that it looked like something else entirely, not just a water droplet in the sun but almost a woman in a skirt giving birth. The droplet just hung there still attached to the moss but would eventually fall and sever the ties as do all infants at birth. The connection between the purpose of the water, to bring in new light or energy into the world, was obvious to me and although the image made me blush a little, being male and never having seen a birth in person, it stayed with me and I began to accept it for what it was.

"Bill's" poem

Dangling in a radiating rhetoric
Moisture manipulating the energy of a star
Embraced by a creature of its creation
Enticing me from afar

I sought out the stump
But you caught my eye
Inspiring investigation
As to how come and why

Gravity gropes your form
The ground waits in anticipation
Yet the lucky lichen holds on
Keeping you firmly in your situation

The gentle breeze brings
Forth a more playful side
On top of its gusts and gales
You do ride

Bridged by a spider's web
Discovering the branch's empty space
The filaments all flicker—pointing to you in your place.

Figure 19. *"The droplet just hung there still attached to the moss but would eventually fall and sever the ties as do all infants at birth".*

"Carl's" Experience of Intuition Through a Feeling State

"Carl" sat at the southern edge of the research site on a cold, wet day, in the Pacific Northwest. He found himself entering the place state through the image making process. As he began writing about the place and how he chose it, "Carl" acknowledged that place was shaping his feeling state as well. "Carl" was experiencing the nuances of the place and gathering them into his body. He wrote, *"I feel decay."* In the passage below "Carl" writes his sense impressions that led up to his feelings. "Carl" experienced a corporeal knowing of the landscape through a sense impression. He listened to what the landscape had to say and literally became the decay.

> *The sun's reflection off the pond is surreal. I can't tell if I'm looking through the water at the browns and greens or whether my angle of refraction is the only color schematic visible. I feel decay. The standing water feels like an acid hole sucking nutrients from the surrounding ecosystem. I see light weaving in and out of the ends of the organic matter, but pigment has shriveled away. The rectangular structure of the plant cells is reflecting a muddy brown, soon to be broken and dispersed possibly into the acidic hole.*

FIELD NOTE – Goose Pond, Keene, NH

Images Like Metaphor Produce a New Language

In this section, I will explore my second research question: "How does the image created in ABPE reveal the land's stories and lead one to clues of the evolutionary history of the land?" These questions were explored at my research site in New Hampshire. In addition, I asked these questions: how does one interpret complex patterns of place through

perceptual experiments with scale? What is the language that describes these perceptual patterns unavailable to sight alone? Following is an excerpt from my notes written at the field site in first person narrative.

I stand at the edge of a New England woods, situated in the Connecticut River Valley of southwestern New Hampshire, looking out across the frozen surface of Goose Pond. This transition forest supports young stands of hemlock and older groves of beech, maple, and some red oak. The tight, smooth, gray bark of the beech is a pleasing sight to my eyes as I scan the landscape; their patterns of vertical gray/brown trunks stand in contrast to the immense ground of winter white snow.

I walk deep into the New England woods following a path that runs parallel to a small frozen creek. I traverse a low-lying ridge. My attention is captured by a group of five trees. At the base of each tree is a perfect circle cut out of the deep layer of snow. Each circle is exactly five inches in width, a perfect ring encircling each tree. The interior of the circle reveals the gray and brown of forest litter, a space of land unclaimed by the crusty snow. This sight fascinates me. I look around the wooded area, nowhere else do I see this phenomena. I squint my eyes and the woods transform into a pond where pine, oak, and birch have landed upright in this vast liquid pool. Like a pebble thrown into a body of water, the trees send out ripples of concentric circles into the mirrored surface of the liquid landscape.

By opening myself to imagination in this way, I opened a space for new learning possibilities. Imagination gifted me with the capability of seeing what was not

immediately present. In this practice I relinquished the boundaries of my reality and experienced them as permeable. This gave me a clearer understanding of the circle phenomena. I recognized that the most direct way to know this communication was to engage my full body. I cannot know truth if I am unwilling to imagine the unimaginable.

I am in love with the absolute order of these circles and want to be nearer nature's art work. I am compelled to make art at this site and begin by using the natural materials available to me, the very snow I am walking in. I squat with bent knees next to the trees and trace my gloved hand along imagined ripples, circles in the snow, repeating the template created by nature. The first circles are five inches out from the base of each tree, and then I add mine: 10 inches, 15, and then 20. By the third circle the lines begin to intersect. I rise and step back to view my work.

My swaggering lines mirror my frozen hands. I am disappointed at the mess I am making of this once pristine landscape. I decide to walk the circles instead, expecting I will have more control with my feet rather than my hands. I purposely place my foot within the boundaries of each drawn line; carefully, heel for toe in order to form as smooth a line as possible (see Figure 20). As I walk this path, I repeat my intention, "What can you tell me today?"[195] I am aware of the gentle movement of my body engaged in motion as I circle this stand of trees. My footsteps carve deep gorges in the snow, which are drenched in purple shadows cast from the timid light at this northern latitude.

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195 Allen, P. (personal communication, 1995)

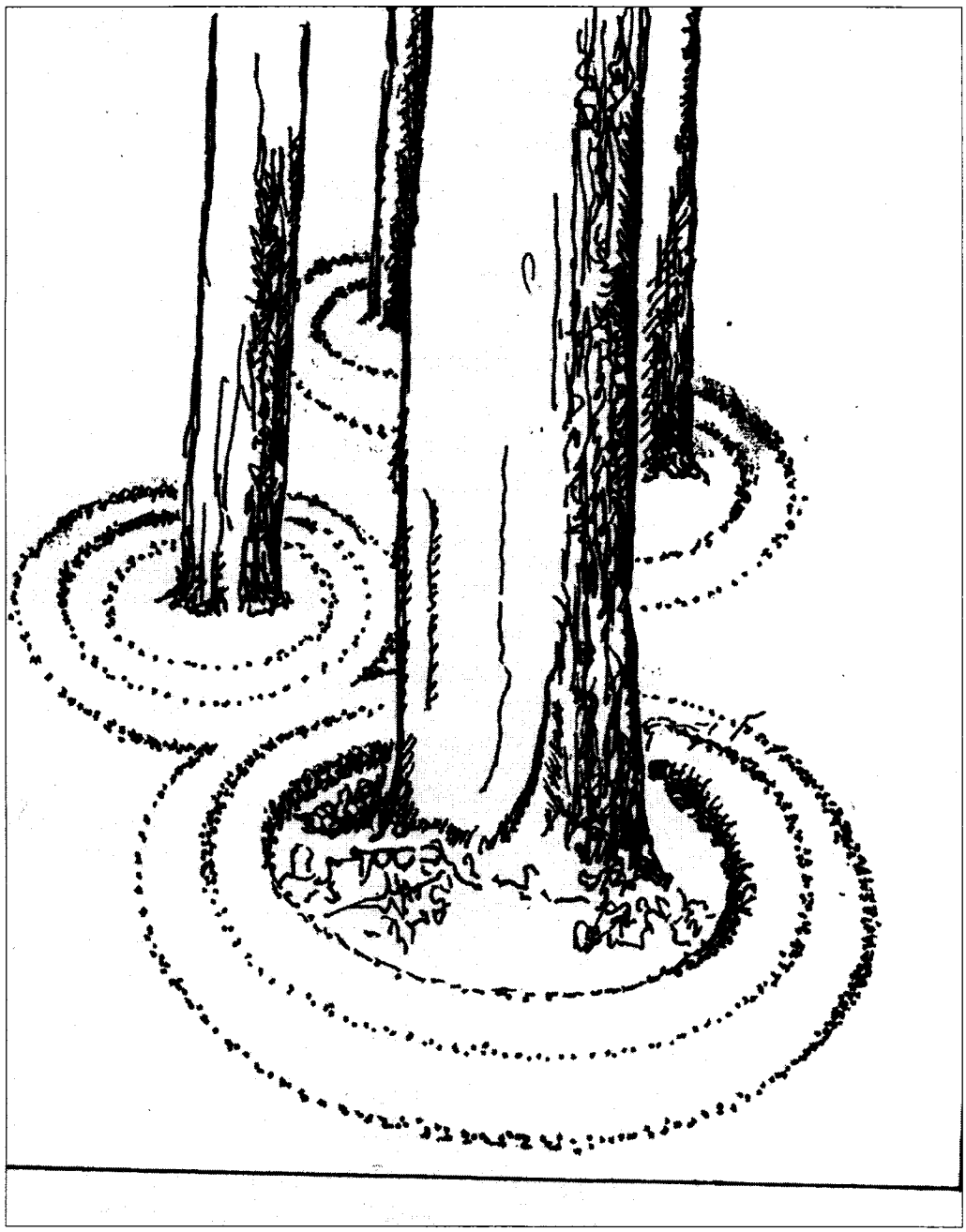

Figure 20. *My hand drawn circles surround natures' circles at the base of the beech trees in southern New Hampshire.*

Through the physical movement of walking the land, my body was engaged in motion mimicking, the motion of the phenomenon of the place, of fluxes and flows found in the landscape. With my body in motion, I was kinetic energy participating in an energy exchange with this landscape. Through my body's movement, I was in full exchange with all creation at this site. By entering the view before me, the snow-covered landscape through its own dynamic equilibrium, its own energy, I became a part of that landscape. I united with the atoms of water by walking in its solid form.

The art that I created at this site was as present, as tangible as I am; it had shape and form, weight and matter. I knew it by the boundaries of its own physical existence just as I knew my own body, just as I knew the beech tree in front of me.[196] In the experience of making art at the site, I took the art making to another level of symbol and logo recognition by forming matter with my hands and feet. As artist, I became the diffusion and creation of living matter, through the manifestation of energy made visible.

I begin dialogue with the image, the circles I have created in the snow. The practice of dialoguing with the image is a free-flow of consciousness. I must be free of any critics residing in my head, my own critic as well as others, if I am to take in the wisdom that is offered in this dialogue.

Lee Ann Dialoguing with the image and landscape

"Lee Ann"--Why have you shown me this way?

196 Seiden, D. (personal communication 1997)

Image--Look at the integral places of connection, the tension created at the intersection of lines; this is where life is the fullest. It is this intersecting of life that wholeness is formed.

My attention goes to these intersecting lines wrapping the base of each tree and at that point where one circle meets another.

"Lee Ann"-- What do these intersections say about the connection between organisms, population, or species, in this particular niche in this northern forest?

The questions come more freely now that I have opened dialogue with the image. Each question leads me to yet another point of investigation. I question why this particular grouping of trees is in this place. Perhaps seed dispersal, which is a temporal factor, links the trees spatially. Or is it something else, like resource availability, or nutrient cycling systems? If the snow circles are the metaphor for this interconnectedness, what is the connection telling me? I take a sweeping view of the gestalt of the area and again I begin asking the questions.

"Lee Ann"-- Why is there such order to the circles?

I write the reply in my journal. At this point it is hard to know what is my thought or the voice of the image. The image making has ignited my inquiry.

Image--I imagine that the volume of the melted snow and the time required for it to melt must be equal at each site in order to maintain such consistency of shape. If the volume of snow were the same, then the air temperature, which can vary from north to south facing slopes, is not a factor. Is it possible that some or most of the snow evaporated? I am curious, is there an equation for the melting of solids to liquids that includes volume and time? My knowledge in the area of chemistry is not sufficient to answer this question, but I recognize it as a good start for further investigation.

Engaged in the free space of imagination, I was able to continue asking "what if"

questions, which led to the generation of new ideas. This inquiry-based process brought about by practicing ABPE, combined with prior ecological book knowledge supported me in developing yet another understanding of the landscape. What role does gravity play in this phenomenon? Can this be explained from the shape left by the diluted solids? The form was not lost, yet continued to mirror the circular shape of the tree trunk.

> *"Lee Ann"--What if gravity, the directional forces being pulled down into the earth, is added to this equation, the melting of solids to liquids, would the liquefying rate then be the same? Water always seeks a lower level being pulled down by gravity. If however, the directional force of gravity were pulling the water, say along a stream bed, what happens then?"*

Schwenk says, "Water endeavors to round itself off into a sphere, to become an image of the whole cosmos....The combination of the two - sphere and directional force - will result in a screw-like spiraling form."[197]

Spheres, spirals—all circulatory systems of water—with no beginning or end. Water is an ever-continuous flow of movement over time: solid, liquid, and gaseous phases. The watersheds of our planet are a part of this system. They connect all life. As the snow circles melt, their steady contribution of water back into the system assured the continuity of the circular systems of the biosphere.

The background sounds of water at Goose Pond call my attention. I think about mapping the watersheds of the area. Where will this water go? What watersheds or circulatory systems will it join? Where are the flows, dams, and deep currents?

By making art in the field, I was cued into the body language of place by

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197 Schwenk, T. 1999, p.

experiencing the connection between the circulatory systems of my body and the earth's body. When practicing ABPEP, I moved between the abstract and metaphorical to the concrete and rational. My body recognized and housed the felt or tacit knowing of place. My art was the synthesizer, providing a language that communicated the wisdom of place.

FIELD NOTE – Bainbridge Island, WA

Images Make the Patterns Visible

This section of the FIELD NOTES is a record of my experience at the site on Bainbridge Island in response to my third research question: "Are the patterns discovered in the images meaningful to gaining a deeper understanding of place?" What is my experience when practicing art-based perceptual ecology?

In the literature review I spoke of patterns as the code of the land's communication system, which I considered to be the land's language. These patterns are found in landscapes at multiple scales. In my experience at the Santa Cruz River, I spoke of the visible patterns traced on the interior bark of the Freemont Cottonwood. I compared this trail left by the bark beetle to the patterns created by the movement of flowing water; converging drainage patterns I observed when walking down the face of the mountain. Both sets of patterns were visible to the unaided eye. An overarching question remained, how did one-experience patterns at the scale of communities and populations, which were not visible? What methods connected the researcher to worlds unavailable to sight alone?

And further, what methods translated this wisdom of place for those unaware of the language?

My investigation of this research site occurred multiple times during 2004 and 2005. My first studies began solo in the summer of 2004. Then in December 2004, I visited the site again with the 14 co-participants. In May 2005, I returned to the site with 3 of the co-participants to practice the methods of dialoguing with images and landscapes. During this 5-month period of time, I returned to the images time and time again to analyze the data.

Following is an excerpt from my notes written at the field site in first person narrative.

> *As I enter the site this morning the sky is quite overcast, flat and gray. Gray in the Pacific Northwest comes in multiple values and hues; one could fill an entire journal with samples of the vast color range. The site is elevated and I must walk up a steep grade to get to it. There is a noticeable scar on the face of the incline from water erosion so I walk to the left of the barren face, under the trees, so as not to cause more damage.*
>
> *It begins pouring rain and I run for cover, since I forgot to pack my yellow rain parka. Silly me, I am still not accustomed to living in the Pacific Northwest. I stand there for a long time contemplating the rain, its sounds and visuals, residue of its dance with the ensuing landscape; the air, its moisture, temperature, and pressure. I get my journal out to record the poem that is singing in my head. As the rains subside I notice the water shimmering on the underside of the individual hairs of the horsetail plant. The alders hold a soft feathery texture in their lower limbs creating a smoky residue that lingers in the air.*
> *There is an enormous flash of light right over my head followed by a voluminous bank of thunder. That is it for me I pack my things and wait for the first chance to bolt to my car.*
>
> *Wet, what is wet? I walk through the forest floor. The leaves of sword ferns spiral outward from one center. Wetness. The texture of the leaf determines whether the*

water glistens as it slides along its wet trail or whether water holds stead-fast, encapsulated in a bubble. Wet. Color. Saturation. Light streams through to the front side of the salal leaf causing wetness to glisten a yellow-lime green iridescent color to my eye. Wet. Slight sounds of moisture reach the outer leaves of the forest canopy. I am safe nestled in a sanctuary of fir needles below. Darkness in the shadow, no not shadow, but darkness of color under the canopy, brightness of light beyond my eyes' reach. I am on the shadow side of the sun. I am on the shadow side of the trees. Wet. Slick. Shimmering. Glistening. Light. Water. Water droplets. Glistening light. Shimmering wetness. The sounds of my footsteps are softer now.

As I return to the site after this torrential downpour, the sun breaks through the clouds. Some blue sky begins to show. I note a unique element of this site, a rather sizable opening in the forest canopy situated directly over a small pool of water. The edges of the canopy are lacey formed by delicate light fading through transparent chloraphylled leaves. I find a place to sit and pull out my watercolors. The translucent medium of watercolor is ideal for representing what I feel when taking in the illusive canopy view (see Figure 21).

I am aware of the human intervention at this site as there are several stumps shrouded in the underbrush. Most notably is one directly in front of me, a large one almost 6-feet across, left from early logging days. Beyond these explicit reminders, I sense limited human contact: why I am not quite sure, but it remains a question in my exploration. The change in the forest community's composition and structure is primarily due to human disturbance, but I also note some disturbance from fire as I have discovered bits of charcoal here and there on the forest floor. Because of its elevation, this spot feels protected and tucked away.

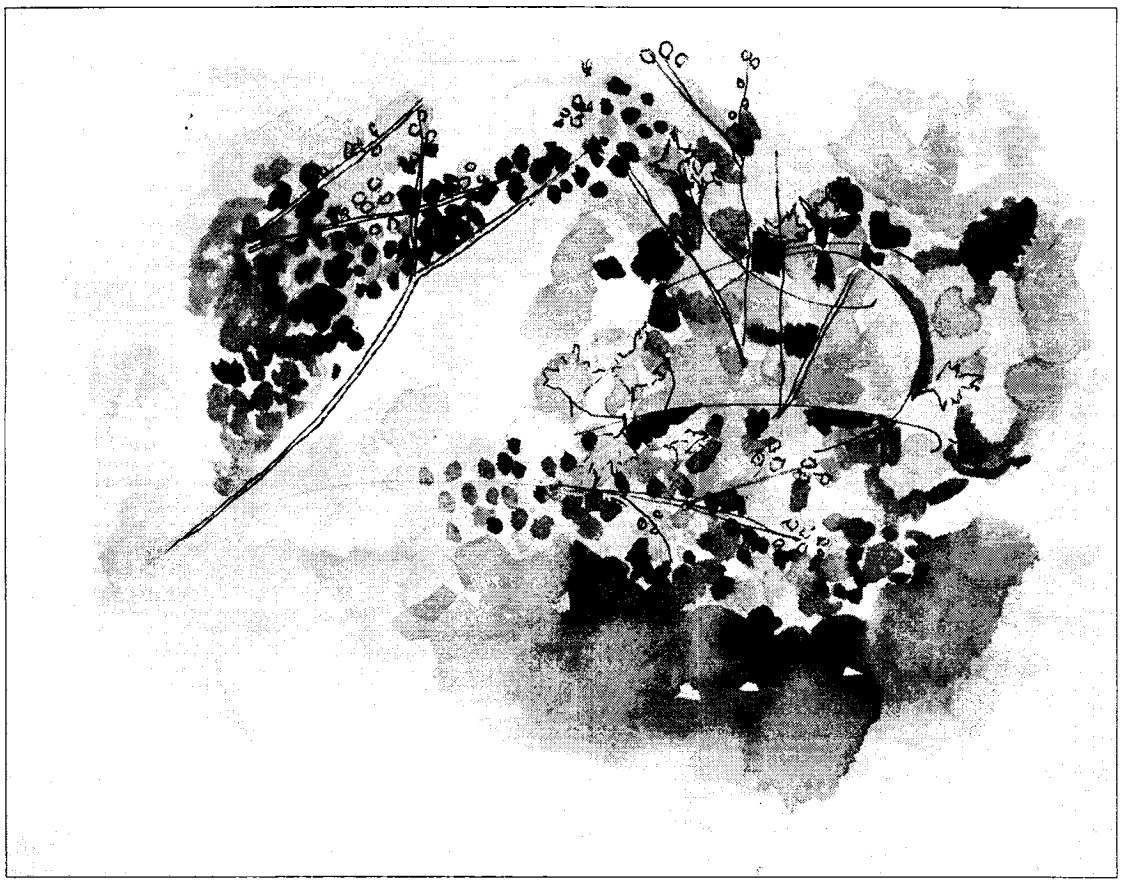

Figure 21. *A watercolor study of the canopy level in a moderate temperate rainforest in the Pacific Northwest.*

When observing a landscape, I find myself continually assessing the quality of the dimensions of space, light, and movement. Dimension is a measure of extent, magnitude or scope, regarded as a fundamental measure of a physical quantity. In math it is one of the least number of independent coordinates required to specify uniquely a point in space or a point in space and time. I am reminded of what James Hillman says, "...dimension is the means of measurement of the essence of our experience in this place through our senses--the scents, sounds, sights, tastes, and temperatures of our lived experience in time

and space."[198] My drawing that follows takes in the full breadth of the place, the gestalt of the landscape (see Figure 22). In this sensory exercise I explore the full extent of my visual field, moving from foreground to background, raising my eyes skyward to the canopy above and back again to the forest floor.

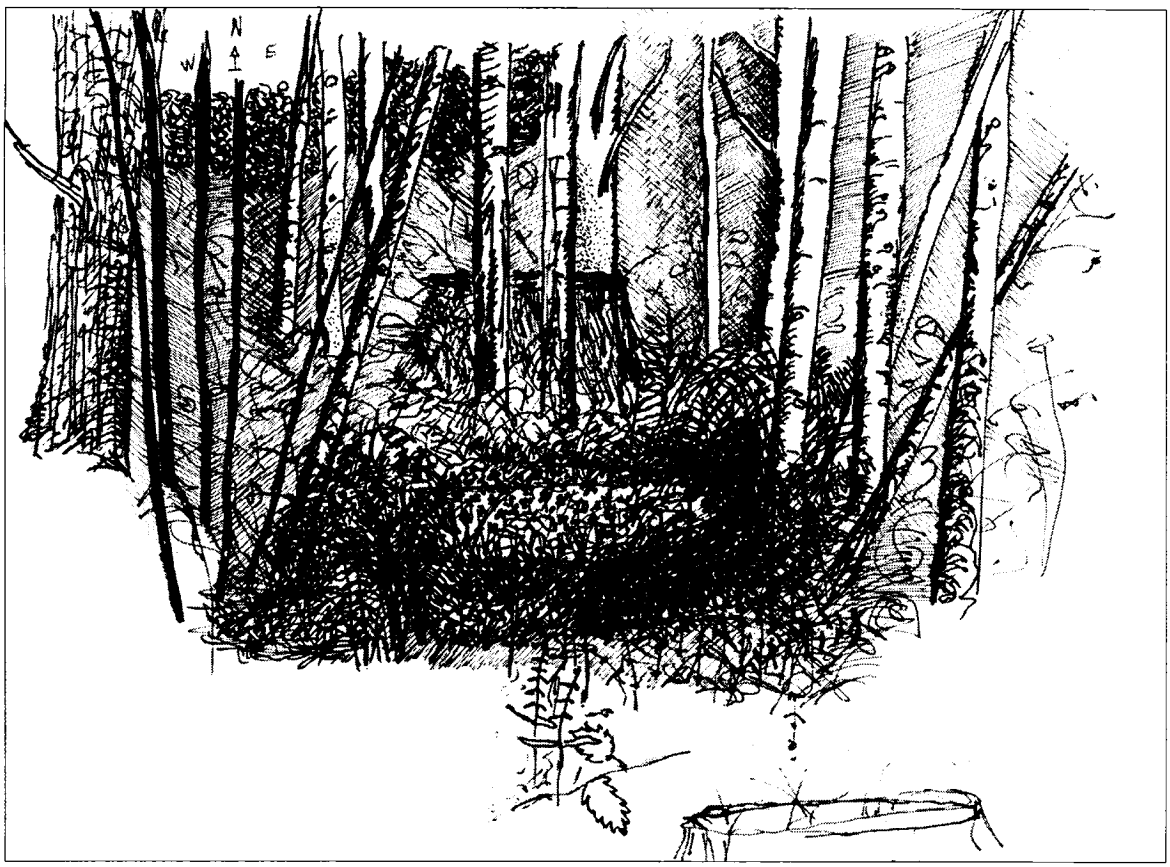

Figure 22. *I find a natural seat tucked in the moss covered nurse log next to the water's edge. I take out my drawing pens and begin to draw a B/W image. As the quality of light wanes and waxes drawing my attention to shape, form and texture, I consider the gestalt of this site. Through the art making process I am considering the quality of the shapes and forms and the variation in texture as they create the essence of this place.*

198 Hillman , J. 1989

I am keenly aware of the spatial dimension of the site as well as a light dimension. I notice the changing sunlight and how it defines the site through a certain quality of light. This quality of light offers more opportunity to notice the distinguishing differences between shade-tolerant plants and shade-intolerant species. I also note how the quality of the light defines edges and borders of these juxtaposing systems. I have been to the site when the light is flat, meaning the subjects in my field of vision held no definition, no radiance, offering a color scheme that was neutral. The light is what creates a spatial dimension, what makes the landscape appear 3-D.

I do not try to replicate what I "see" before me in my images, but I am trying to create a "feeling state" of this "place state" from my phenomenological "measurements."[199] Another way to say this: I try to capture in measurement, the overall health of this ecosystem, expressed in the very essence of its gestures. What is the meaning behind these words? Perhaps inward is representative of the state of feeling and outward is representative of the state of place. How can I know the feeling state of a place? Although I am not conscious of my body's assessment of this place, my internal systems are constantly regulating in response to my environment. What I am most conscious of are my body's assessment of this place through my eyes as they measure the color saturation of a plant's leaf, or my ears as they compare the volume levels of the calls of predator and prey or my skin as it measures air temperature at different levels of the canopy.

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199 Woolery, LA, 1999

Why did I choose this site or should I ask, why did this site choose me? Confluence is the word that first comes to mind. Webster's Dictionary defines confluence as: a gathering, flowing, or meeting together at one juncture or point. I was drawn to these elevated wetlands because it felt like a gathering place of energy, a juncture of multiple systems bordering one another. As I began to explore the area through the art-based perceptual ecology methods, I came to sense other paradoxes at this site in the midst of change.

I sense the glade as a swirling vortex. Vortex in Webster's Dictionary is defined as a place or situation regarded as drawing into its center all that surrounds it. I feel myself being drawn into the energy of this place, yet the words do not come easily to explain that sense. The site itself is not attractive to me, it is a chaotic jumble, a junkyard of miss-matched members of a community. Following is my poem and further images that measure the essence of my experience of this place through my senses.

A whirly wig spins its way earthward as light bathes the right side of the alder with blonde hues of summer.

A young child once asked me, is it true moss only grows on the north side of the trees? I look now, if north is moss then wintering blonde beauties bathe wrapped in multi-layers of fur at the source of this timid light.

Movement here and there captures my attention, a flutter of a leaf talking to another. Light flickers reflected from chlorophyllic consumers on the pool in front of me mirroring a community of common species, different shapes, yet same origin.

I reach out to the gray pithy structure in front of me, it is weary and brittle beneath my hand. The land creates such a paradox of wet and dry, life and death.

In this circular depressed vessel, three-leaved vines spread tendrils round my feet leaving me dizzy with delight as they draw me spiraling down into the center of the swirling vortex of the earth below.

In the ABPE methodology I have designed multiple exercises that lead me to an understanding of this pattern language in landscapes, most notably the abstraction exercise (which I practiced at the Hominey Branch research site), shadow exercise (which I practiced at the Santa Cruz River research site), and the facsimile exercise. At this site I chose to practice variations of all three.

The graphic facsimile is different from photographic realism. The goal is not to reproduce the exact image in my visual field. Instead, I take this organic entity into my body through my senses I smell its lush wet deterioration, touch the velvet smoothness of microorganisms forming on its skin, taste the thick air, organic material filtered through precipitation over time. I reproduce this event kinesthetically, the natural decomposition of the biodiversity found in this Northwest temperate rain forest.

In this transference of energy takes place through the image making exercise, energy travels down my arm and out the ends of my fingertips and into the art medium. This energy exchange recreates the very essence of the energy that formed the organic debris. In the act of drawing, I am actively living through the event. My drawing is a visible graphic record[200] of the communication of the sensorial exchange between the landscape and me.

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200 Rhyne, J. 1984

I began with the medium of watercolor and choose to paint the immediate view in front of me. In a scientific investigation one might record the landscape through a line or square transect. In a line transect the researcher would record the biodiversity of the site by counting and identifying the plants on either side of the line, recording their Latin or common names. In the arts-based investigation one employs a method of recording biodiversity through a multi-stage process. When I shift my focus to the particulars, details surface (see Figure 23). The objects of my view, sword fern, alder, and maple seed, all are made up of patterns to which I respond.

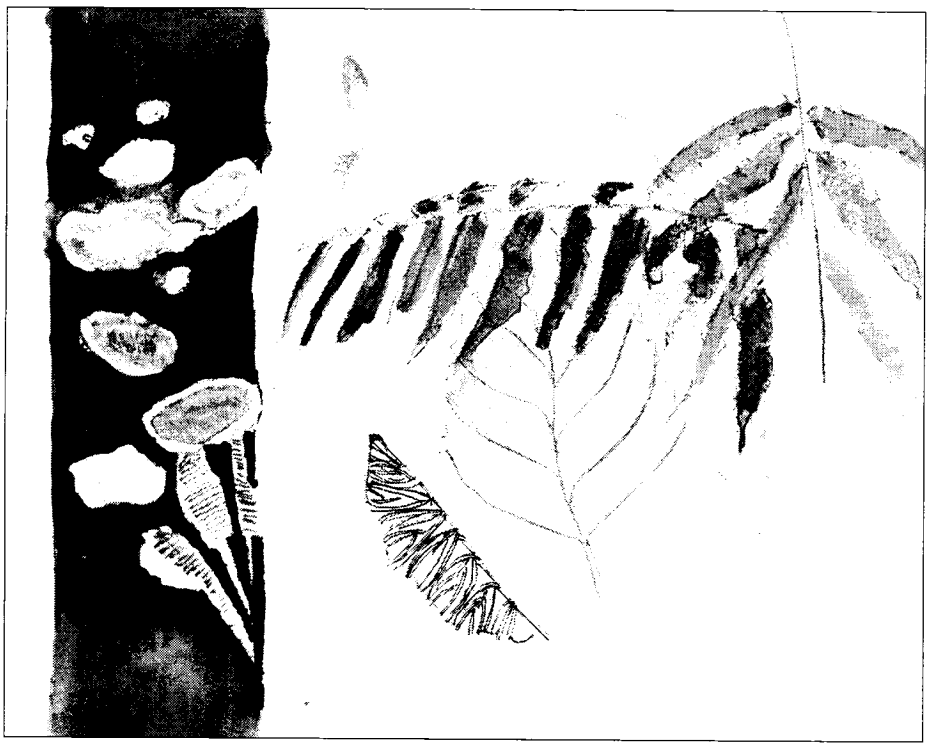

Figure 23. *In this watercolor, similar to an ecologist's line transect, I paint the patterns that my eyes can detect in the landscape. I am not concerned with the names of the plants, but am open to the knowledge that might come from focusing on the relationship between patterns.*

Figure 24. *In this naturalist painting of the forest composition, I add layer after layer of the translucent watercolor, which creates depth and detail in the painting. I overlay this basic composition with colored pencil and black illustration pen. This process metaphorically speaks of the layers of dietrus found on the forest floor.*

Beginning with level one of the abstraction exercise I paint the subject of my view as I see it before me, what I call the naturalist painting (see Figure 24). Some artists refer

to this as a realistic style as opposed to an expressionistic style. Realism refers to a drawing that represents a high degree of similarity to the observed subject. Expressionistic involves a deconstruction of the subject combined with a large amount of the artist's voice. My naturalist illustration, lends itself more towards realism, depicting species composition; lay of the land, and light and shadow, the essential components of this visual landscape.

When I feel the drawing is complete I move it at a distance, positioning the drawing between the nurse log and me. At the completion of this painting I note my disappointment with the work. When I view the painting I do not experience the same visceral feeling as I did when sitting in the spot, soaking in the sense of this place. The painting is an accurate account of my visual perception of the landscape, depicting density and species composition, but it says nothing of the communication between or within me and the flesh of the land, my ecological perception of place.

I begin the visual observation exercise again and note two distinct linear patterns in my visual field. Immediately in front of me is the graceful arch of the vegetation bordering the water's edge. The pattern formed, as the grass gracefully dips toward the earth, is a natural shape of an arch. Following my visual path from foreground to background, my eye moves upward into the forest canopy and I note the gesture created by the limbs of the trees, the pattern forms the reverse gesture of the grasses. The arch turns upward as the limbs reach toward the sky. I write the question in my journal for future reflection, what is the meaning behind the shape of the arch? Such a simple gesture, pointing towards earth,

towards sky, must be speaking of some wisdom it holds in its shape, but what is the meaning?

I begin to map the gesture, the graceful curves of the grasses. My eye travels along the linear path of the growth of each, the plant and the tree. In my drawing (see Figure 25) I use a black rapidiograph to outline the graceful curves of the grasses, focusing my attention on a select portion of my visual field, an edge that denotes a boundary between systems.

I am curious about the feeling in my body when I am engaged in the repetitive movement, my hand's motion as I outline the patterns of growth of the grasses in the drawing; a pattern of body movement for me, a pattern of morphology for the plant. What does my hand know when it mirrors the gesture of the grasses? I noticed how the grasses cut through the space and I wonder what the correlation is of a line cutting the space while simultaneously being drawn down by the earth's gravitational pull?

I imagine the choreography of professional dancers: what can they know of their surrounding environment as they move their bodies through space? What might I know if I were to get up now and move my body, mirroring the gesture of the grasses? I sense there is more happening right before my eyes than I can "see." Focusing on the spatial quality of the landscape with my unaided eye, lends one level of understanding place: practicing ABPE yields a fuller sense of this place and an ecological perception unavailable through only a Western scientific methodology.

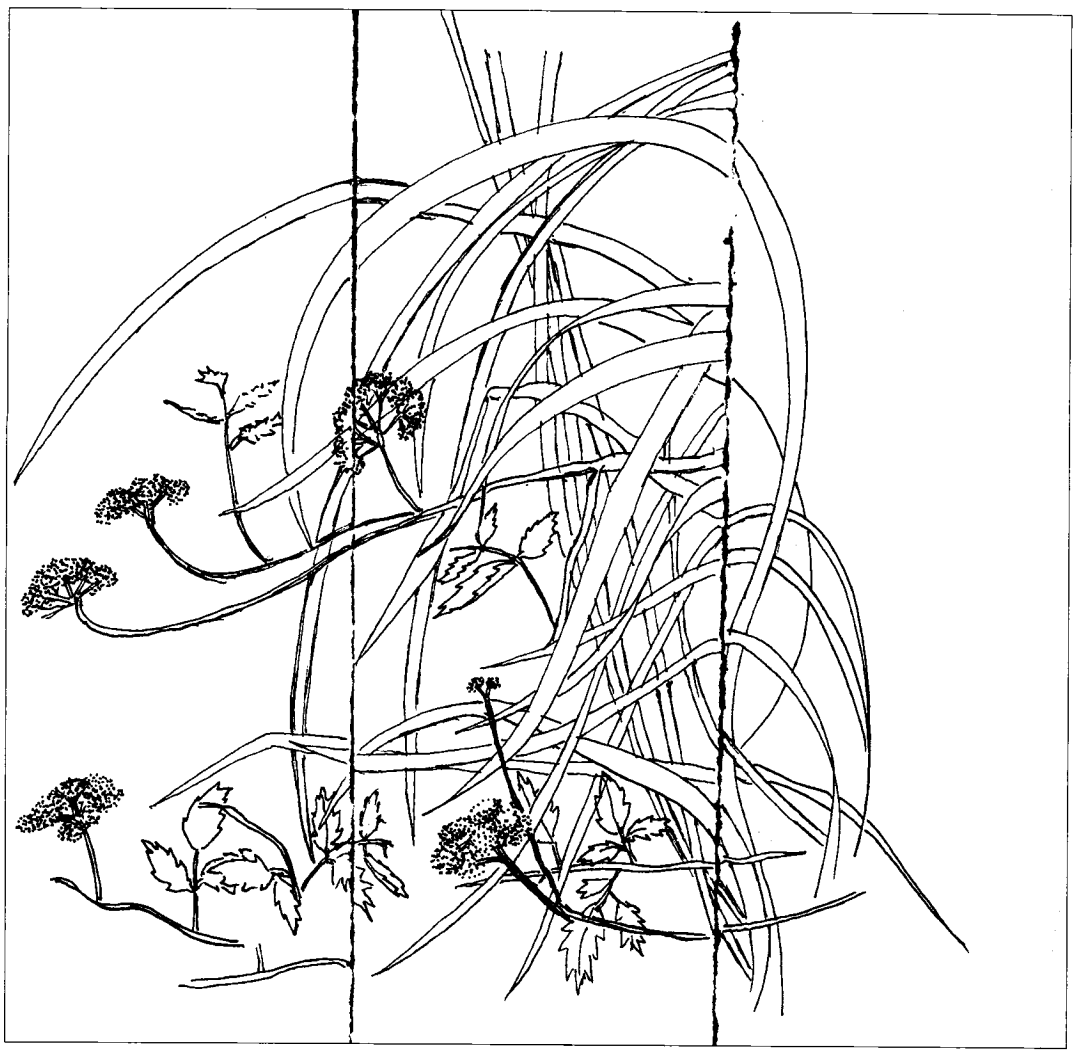

Figure 25. *We barely notice interactions between and amongst organisms in the landscape, but what we notice most readily is the static result of the dynamic equilibrium of these movements of energy systems. We recognize the static result as beauty,*[201] *but we also know it as the growth of the plant seen as graceful arches in the landscape.*

201 Vernadsky, V. 1998

Lee Ann's narrative

I move to the opposite side of the glen. Looking across this forest ecosystem I encounter examples of pattern language at every scale. These patterns present themselves as the shape of an arch in the grass at the edge of the glen, clouds that hold the moisture of the water cycle, and the ripples moving across the water's surface from the southern winds.

What are the coordinates of patterns that specify uniquely a point in space and time? What are the coordinates of texture, shape, or form that specify uniquely the space and its history of evolutionary time? These points could be the delineation of edge or boundary, where two systems meet. Answers to these questions point to the gestalt of this landscape. Sounds of the spring vortex get my attention. A wren lets loose, drilling a song that penetrates the space. I notice the long-term growth in the patterns of the landscape. I think about air, about space, the space one can cut with the swoosh of one's arm.

Best friends grew up next to one another, sharing the same weather patterns, nutrients, and the same songs. Were they best friends or constantly at war? How do they communicate with one another? What did the empty space feel like when best friends were cut down at the hands of a saw or split by the violent strike of a lightening bolt?

I feel a rhythm in the placement of the trees. I want to go with it and dance it too. Placement of the red alder, create dance steps: there seems to be an inner circle dance and an outer circle dance. What is it telling me? If I mapped it out, if I danced it out, what might I know?

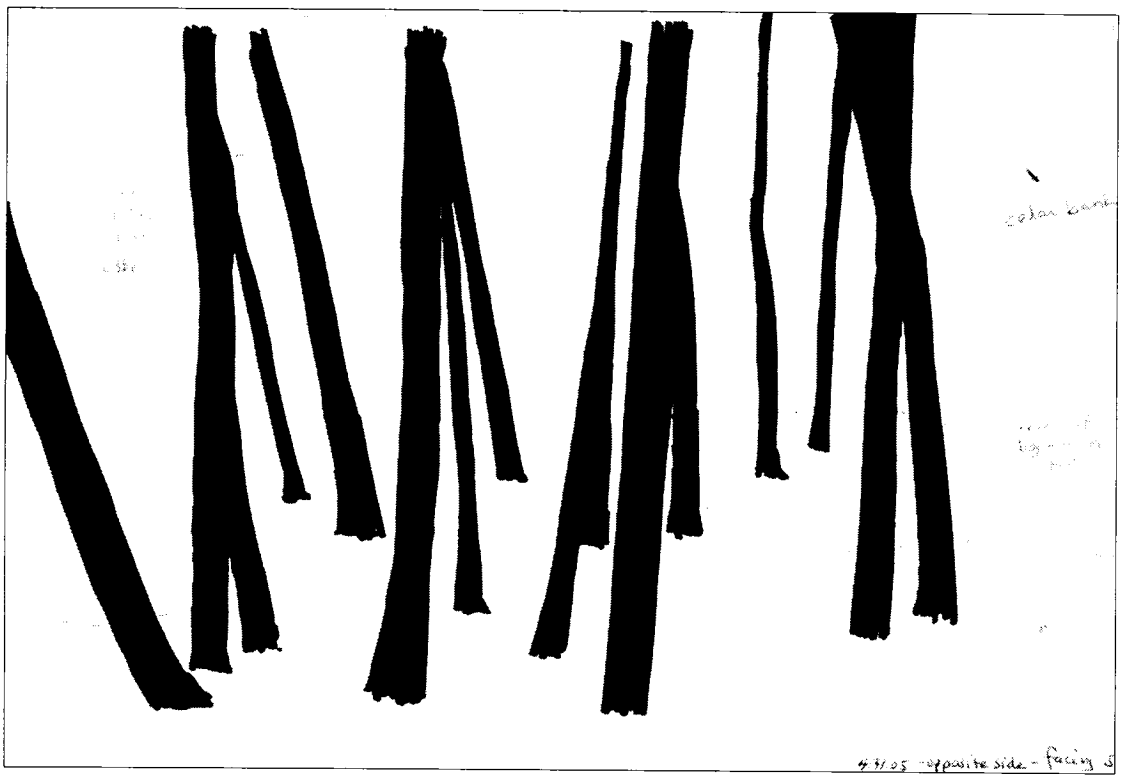

Figure 26. *I am still overwhelmed by the lack of middle canopy growth. It's like a ring; a swath has been sheered horizontally from this element of the forest.*

I enter the physical space and then look up and begin to consider the space above me, which is filled with the temporal processes of respiration and precipitation. The spaces between what: the trunks of the alders, the edges of leaves in the forest canopy, the overlapping clouds moving in from the north? What is happening in the spaces between? My perception begins to shift when I focus on the air or "empty space." My attention is drawn to the relationships between the main subjects. What can this space tell me about the systems embedded in the landscape?

Using color pencil and rapidiograph pens, I begin overlapping images, and I create an image of a pool of water held within the open space at the middle canopy of the alder grove (see Figure 27). I am not sure why I do this, but something tells me I should. When I listen to the intuitive voice within, I trust the voice, which tells me this image, will lead to the next level of understanding of the story of this land place.

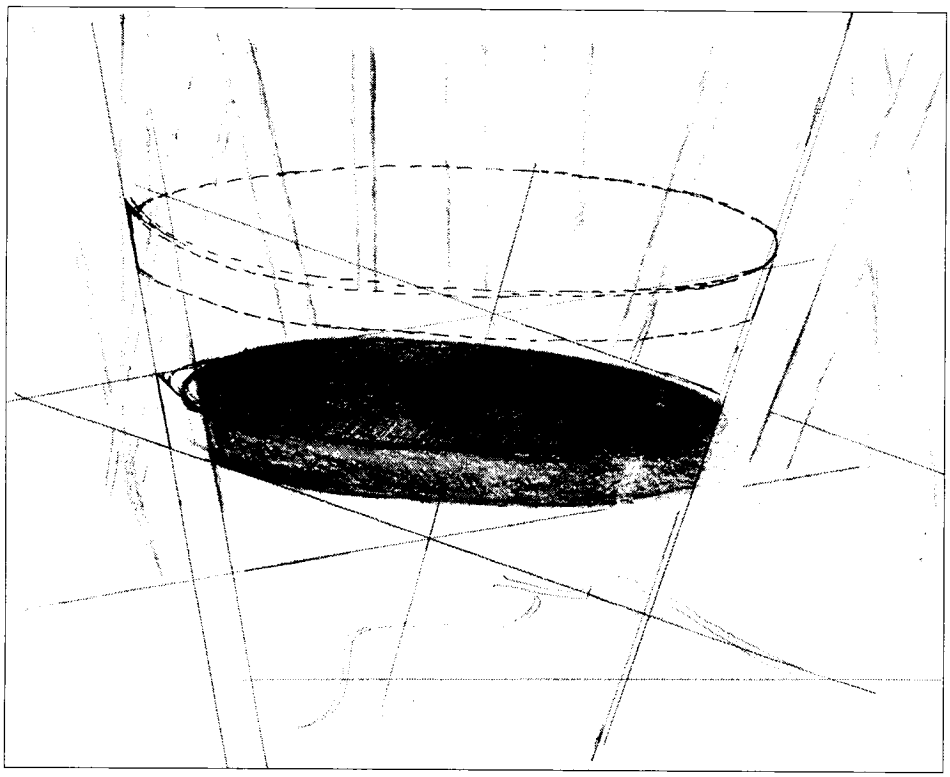

Figure 27. *In this drawing I am intuitively considering the space above my immediate field of vision. When making the drawing, questions come into my mind. What is happening at the scale of precipitation? What can I know about the evolutionary history of this system by considering the forest at multiple scales?*

Once again I map the young alders in the grove in front of me considering their placement as if they were the dance steps of a great choreographer, but who is the choreographer and what is the name of the dance? After creating the image (see Figure 28), I truly began to feel the patterns, feeling the patterns as opposed to seeing the patterns. There is a dance, a musical score, a numerical sign taking place. There are stories being told in my images, which are translations of the land's stories.

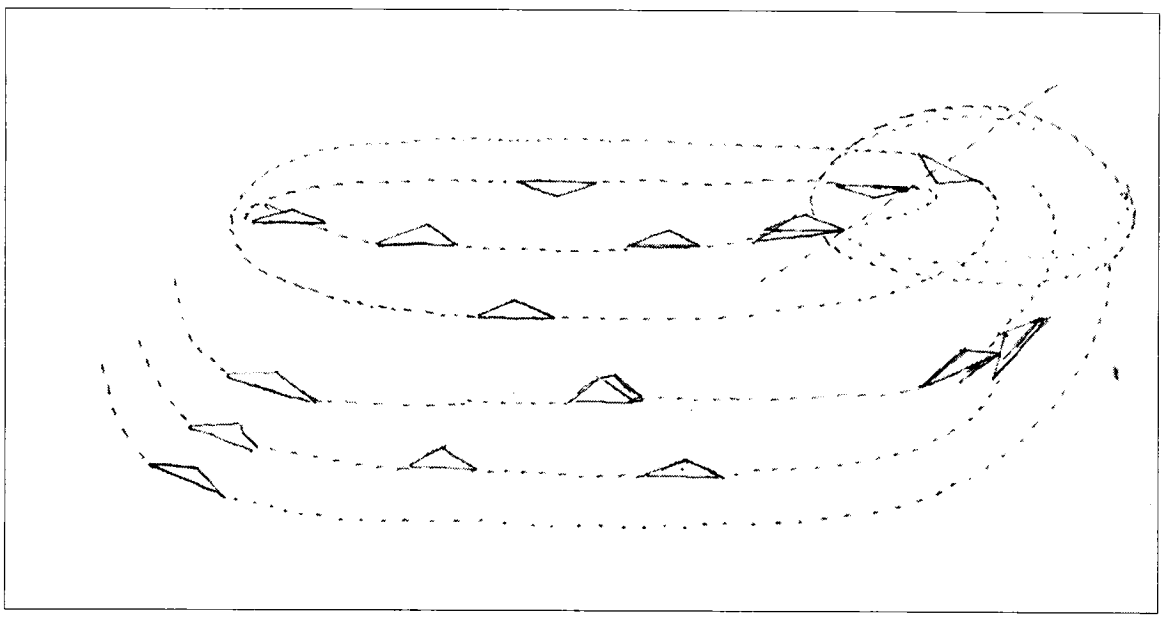

Figure 28. *In this drawing I literally lay out the dance steps. Viewing the landscape in this way leads me to reframe the place, moving from an ecological framework of landscapes to a poetics of place.*

The course of time it takes to study this site in this much detail is extensive. Each time I returned to the site I felt a stronger connection to this place and I was able to go to a deeper level of ecological perception and thus understanding. The next time I return to the

site, I create a series of images practicing the abstraction exercise. In this exercise I eliminate the forest surrounding: the essence of the glen. I literally peel away the layers of my view that I might get to a deeper understanding of the confluent systems (see Figure 29).

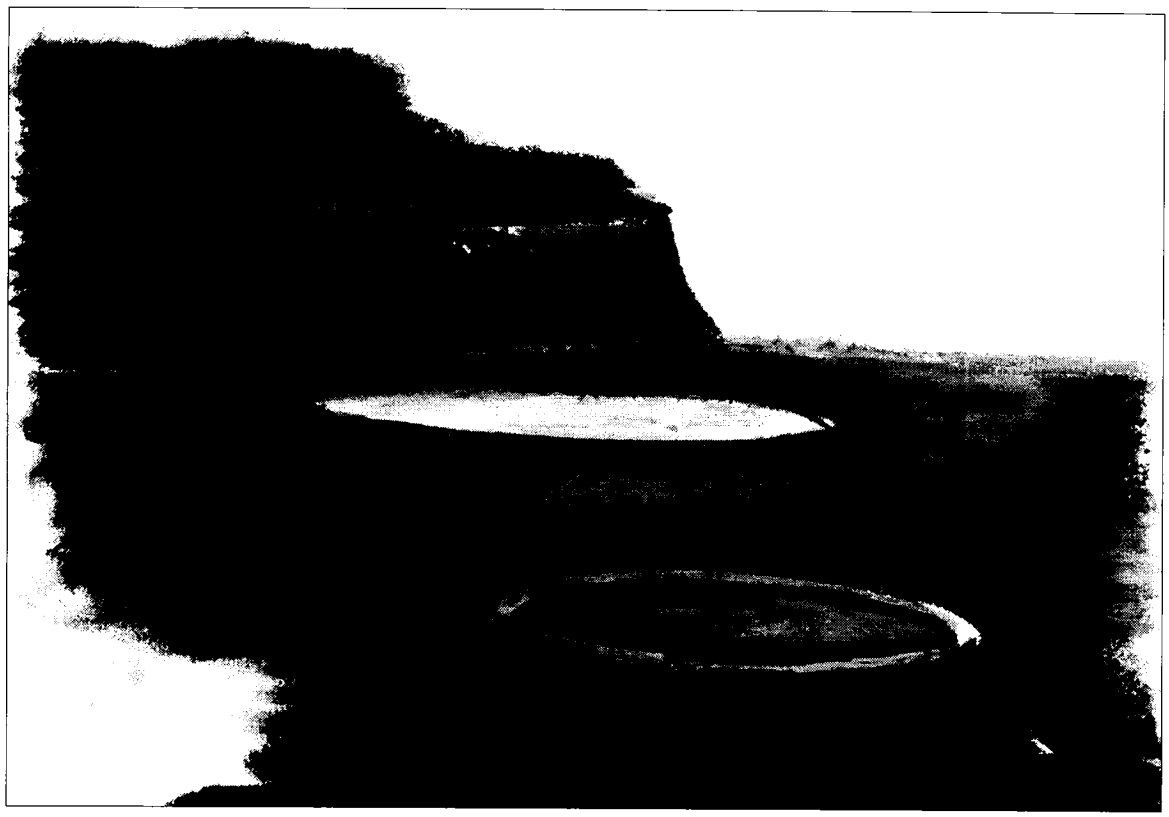

Figure 29. *In this image I have eliminated most elements of the forest system and instead I focus on the pool of water and two of the old-growth trees whose stumps have been left behind from previous logging days.*

When using the medium of Cray-pay or oil pastels, one works meticulously with the movement of the hand. In order to achieve this level of color, the artist must spend extensive time blending colors with one's fingers, a lush mixing of oil and skin. Because of this process one becomes intimately aware of the spatial dimensions of the subjects in the landscape. I could not help but reflect on the closeness, the proximity of the water to the deteriorating stumps, which were steaming with life. What is that connection? Life is in your face, but so is death. What is the relationship between life and death in this landscape?

In order to further understand this phenomenon, I create yet another image, but this time I worked with only a mono color scheme (see Figure 30). I am familiar with patterns seen at the scale of landscapes: the explosion and branching pattern. So I consider what the patterns might look like from a bird's eye view, patterns of life so closely aligned to death?

When making images, the marks I place on the page are the language that speaks of the dimensions of the landscape. My choice of the style of marks, medium, and color, are also part of the language. The marks are known as a traditional vocabulary of the artist's language. I consider what the outcome might be if I brought in the vocabulary from another discipline such as math and overlaid the math vocabulary with the visual language of art (see Figure 31). Might this juxtaposition assist mathematicians in crossing the chasm to a new semantics and thus a new understanding of this landscape? How might

this interdisciplinary vocabulary assist the ecologist or artist/researcher in a deeper understanding of this landscape?

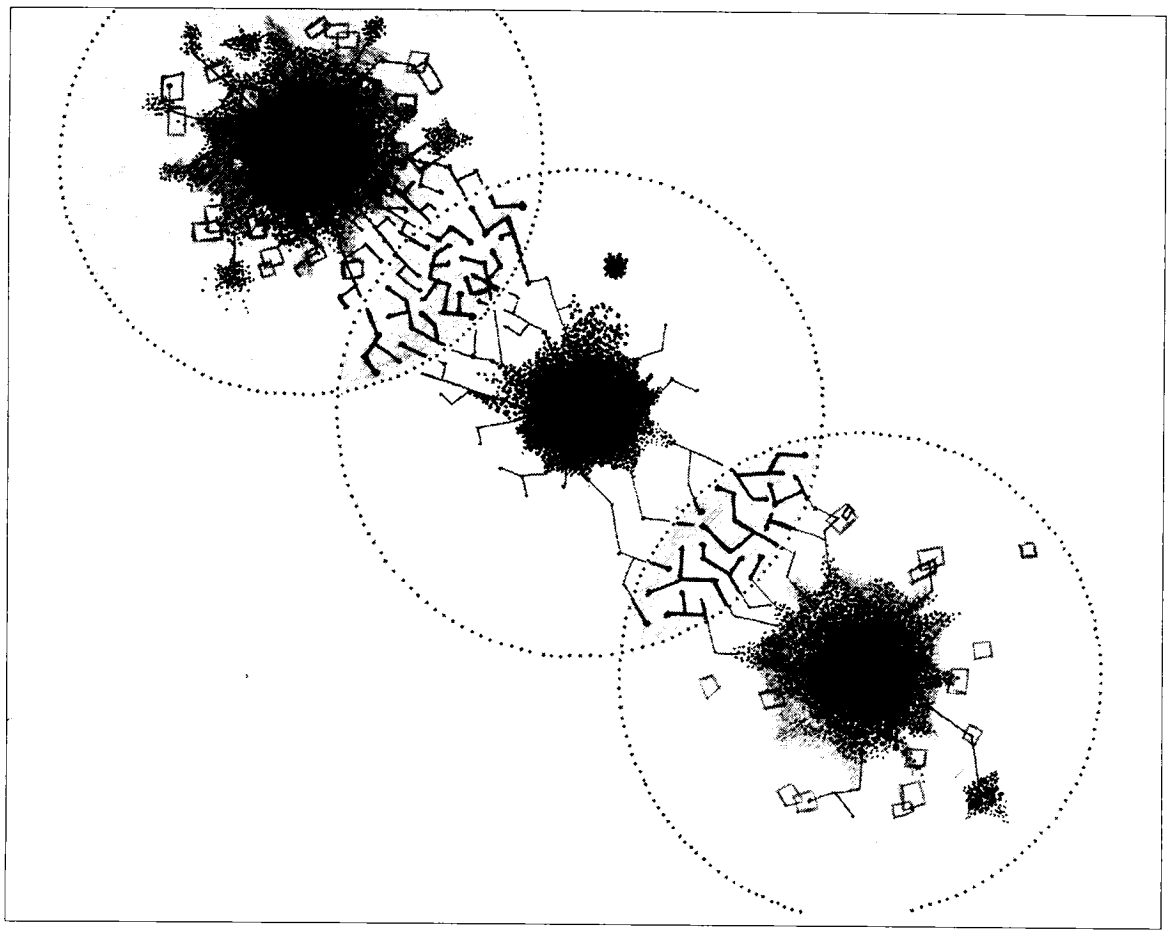

Figure 30. *The image is the translation of the land's communication system, seen as patterns in the landscape from a micro scale. In the image the landscape becomes an abstract expressionistic piece of art.*

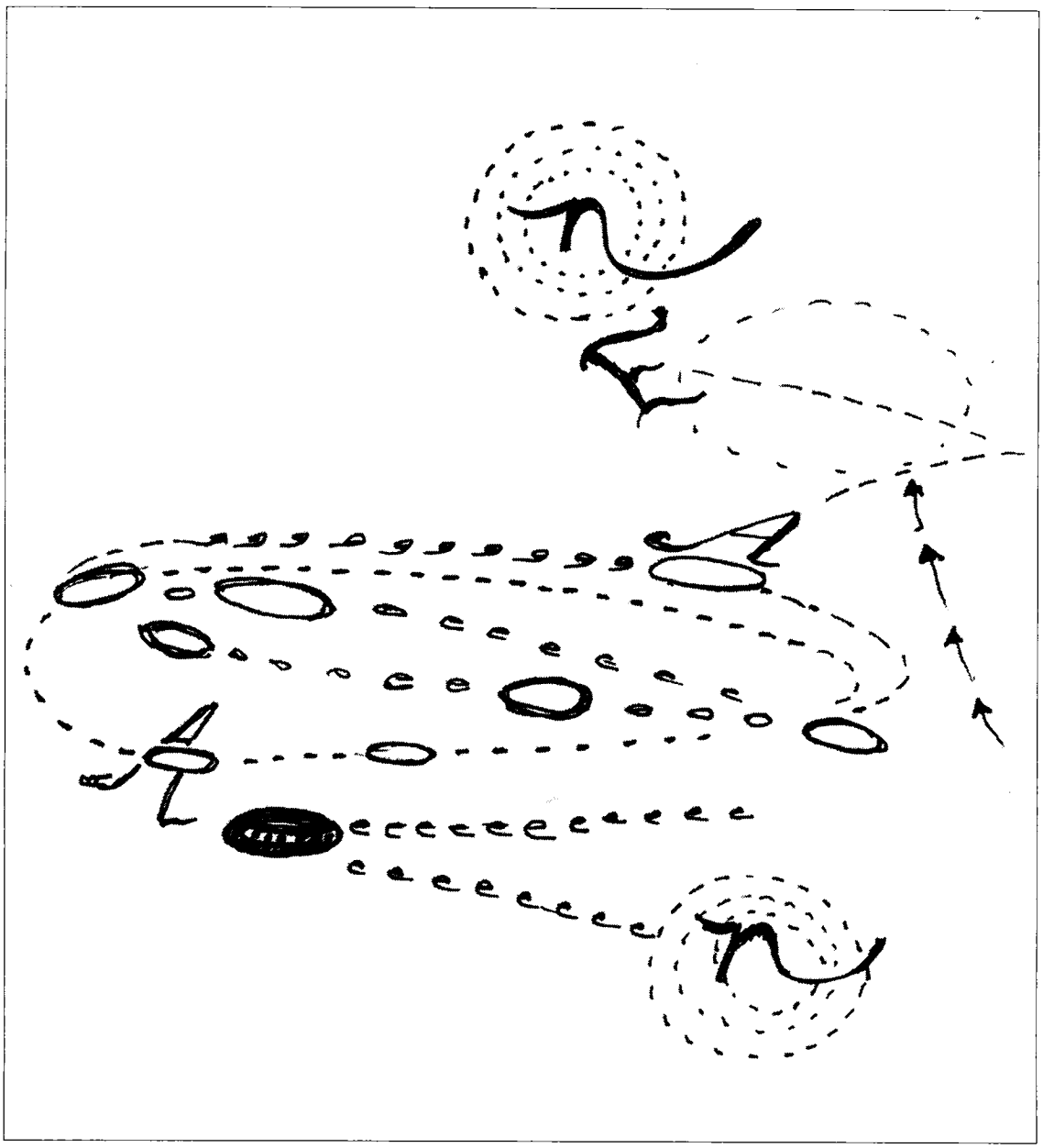

Figure 31. *This image depicts a pluralistic discourse, which might provide a new understanding of this multi-lingual landscape to an interdisciplinary audience.*

Upon completion of the multi-level process of ABPE, my questions continue: what is the natural predisposition of the human mind for the representation of one's thinking and knowledge construction? When practicing ABPE, the image is an expression of my ecological perception and a vocabulary of the land's stories. I see the image as a recapitulation[202] of the wisdom of place. I feel as though I am closer to being a fluent speaker of the native language of this landscape.

202 Haeckel, E. In O. Breidbach, 1998

CHAPTER 5

Discussion and Summary

Chapter 5 analyzes, interprets, and discusses the data resulting from the research at the four sites using various ABPE practices. The chapter will discuss the results as they answer the research questions.

Research Questions

1. How is the practice of ABPE a way of knowing the language of place that does not rely on the dominant Western scientific paradigm of logic and reason?

2. How does the image created in ABPE reveal the land's stories and lead one to clues of the evolutionary history of the land?

3. Are the patterns discovered in the images meaningful to gaining a deeper understanding of a place?

Data analysis of the art-based autoethnographic research involved playing with the data and recording the play. One element of play involved laying the images out in front of me in a configuration similar to the actual research site and practicing dialoguing with the images (see Appendix C). The image dialogue was recorded, transcribed, and edited. The ensuing text was treated as a piece of creative writing for the purpose of achieving

maximum expressive effect. In the element of play, I arranged and rearranged the images like clues to a mystery in expectation of patterns evolving that would lead me further in my analysis. When responding to the co-participants' data, I ask the same questions I asked myself. Below is the matrix used to assess the data from "Ann," "Bill" and "Carl." The data in the matrix was analyzed to see if ABPE has opened the co-participants to other ways of knowing the landscape. The full assessment can be seen in Appendix K.

NAME	FOUND IN NARRATIVES	FOUND IN IMAGES	MY OBSERVATON
New Awareness			
Acute Sensibility			
Embodied Knowing			
Understanding Concepts of Landscape Ecology			
Understanding Magic			
Use of Intuition			
Use of Imagination			
Use of Metaphor			
Use of Emotional Intelligence			
Use of Science Language			
Use of Art Language			

In the Discussion chapter the key concepts of ABPE—direct experience, magic, intuition, imagination, and image making—were discussed in relation to the researcher and co-participants' experiences expressed through images and written narratives.

The structure of the chapter is organized in three sections, presenting the findings as they respond to each of the three research questions. The organization of each finding begins with the researcher's experience in the order that mirrors the Results chapter, beginning with the results from the Hominey Branch research site.

Following the researcher's results will be the co-participants' experiences at the Bainbridge Island research site. The data collected from the 14 co-participants represents the time each participant had available for the study. All data from the co-participants was taken into account when writing the Discussion chapter.

"Ann" was the only co-participant available for an in-depth interview (see Appendix H). The analysis of my conversation with "Ann" is dispersed though out the Discussion chapter. I present "Bill's" work as an example of his use of the visual and written language; considering how one's predisposed process of knowledge construction may be a reflection of their multiple intelligence or learning style. I present "Carl's" work as one example, which shows his ability to articulate his felt knowledge through the written narrative. Because further conversation was not possible with "Bill" or "Carl," I cannot know if the outcomes were a result of the order of the exercises or if the outcomes were a result of a scaffolding effect between the writing and image making processes. Further study would be necessary to come to any conclusions.

The experiences of the researcher and co-participants' do not fit neatly into only one finding; there is overlap. You will see data duplicated as it often supports multiple findings. The chapter will conclude with a summary statement and recommendations for further research.

Research Question 1

How is the Practice of ABPE a Way of Knowing the Language of Place That Does Not Rely on the Dominant Western Scientific Paradigm of Logic and Reason?

FINDING 1: The ABPE practice can access the participant's embodied sensory experience in the landscape, articulate it, and give it form through the image.

Body language is a means of communication. Body language may include subtle slight movement in a facial feature, a shift of body weight, or a change in breathing patterns. Each of these body movements can give information as to the underlying premise that makes up the person, a clue to their developing identity. The land also communicates through a similar body language. As a child, at Hominey Branch, I learned to read the land's language, its gestures and codes. Because of the considerable amount of time I spent in those places, I embodied a knowing of the land's language system. I built a cognitive map of the developing identity of that particular place.

The ability to read the gestures of the landscape gave me insight to the overall conditions of the forest ecosystem, the relationships between all animate beings in that system. At Hominey Branch, I was drawn to a particular pool of water that collected at the

base of a shale ledge. I was drawn to this place as it held a sense of mystery and magic. There I learned of the power of decay and decomposition found in the deep dark mudflats beneath the ledge. It was there that I experienced the importance of decomposers as place markers in ecological systems. In my child mind, I could not frame my knowing of this place through the ecological language I am using now. Instead, I framed it as a mystery that lay waiting in the darkness, drawing me deeper into the world of the unknown. My understanding of the mysterious place came from an intuitive knowing gained from sense impressions embodied from direct experience in the landscape. Such a child's insight I consider to be an embodied perceptual knowledge.

Years later, practicing ABPE brought forth my childhood knowing to my adult sense. Cutting through the cultural constructs I had acquired as an adult in order to get to this childhood knowing was not easy. I cannot articulate how I did this, except that the image making led the way. The collage, the last step in the ABPE abstraction exercise, gave voice to the knowing (see Figure 5). In the abstraction exercise, rather than focusing on the ledge or the pool of water, I deconstructed the land's structural elements: nutrient cycling, species composition, and stream velocity. I reframed them as elements of art: shape, form, texture, light, and shadow. The most prominent shape that emerged in the collage through this process was the decaying body of a sparrow floating in the pool of water.

Making art as an adult opened dialogue with my embodied knowing of this landscape. My body housed the felt knowing of the place; my art was the synthesizer,

providing the language that communicated the wisdom of Hominey Branch. When I listened to the intuitive voice within, I trusted what the voice had to say. This dialogue was manifest in the image (see Figure 5). As a symbol, the dead sparrow articulated my childhood perceptual understanding of decay and its importance in the cycle of life. As an adult, I furthered my understanding of ecological systems through my scholarly studies. The ABPE process synthesized my pluralistic ways of knowing, articulating them in the image. The ABPE practice gave me a deeper knowing and understanding of the relationships between hydrogeochemical processes in the Northwest temperate forest.

"Ann" — Bainbridge Island, WA

"Ann" says she knows the cedar tree through its gestures, its physicality, and she can relate to it through her body. "Something about the way it stands with its grace and its strength that comes across in the patterns of it's branching."

"There's something almost, you know—people that do interpretive dances, I don't know if I need to do an interpretive dance, but I feel like there is in a way this moving, how moving my arms almost gets it across better than words can get it." "Ann" understands she holds an embodied knowledge of the language of the forest and that there are multiple ways of interpreting and expressing that knowledge. I ask her what her understanding is of the expression of the land's wisdom when she translates it through dance, through her body.

"Ann" is very aware of the patterns in the landscape and aware that their language is telling her something; she just doesn't know what it is telling her. I ask her to clarify. "Is the knowing not being articulated through words or are there no words there?" She says there are words there, in her mind, but she doesn't know how to get the knowing across through the English language. She is clearly feeling the frustration of the limitation that comes with her culture's language. I sense the image making has begun the process of translating her embodied knowing. Yet she is having difficulty in translating the visual language to a conscious level. "Ann" is accustomed to relying on words, and the words are not coming.

For "Ann," the ABPE practice bridged her memories of childhood with her present experience in the landscape. Her embodied memory supported her in knowing details of this ecosystem. The abstract exercise allowed "Ann" to move beyond what she literally saw; the image articulated her sensory understanding of the landscape (see Figures 16 & 18).

"Bill"—Bainbridge Island, WA

Historically, stories and images have been a primary means of expressing the relationship between humans and the mysteries of the natural world. The caves of Lascaux could be an example of embodied experience translated through the image. An example of "Bill" giving form to his embodied experience in the landscape can be seen in his image (see Figure 19). His experience also took on the form of metaphor as seen in this section

of his narrative: "Dangling in a radiating rhetoric, moisture manipulating the energy of a star. ... (the water droplet) and I noticed that it looked like something else entirely, not just a water droplet in the sun but almost a woman in a skirt giving birth."

ABPE offered "Bill" a way in which to hold the interactive tension between his tacit and explicit knowing of landscapes: "I sat on a mossy log looking out over the water, a small wetland in winter, dark green with a crisp coolness. A small drop of water, poised above the snag, refracted the colors of the rainbow in my eye."

In the process of image making and painting with words "Bill" was able to synthesize the cognitive processing of his experience and translate it to his culture's language in both the form of an image and story: "I focused on just the branch, moss and the water droplet and I noticed that it looked like something else entirely, not just a water droplet in the sun ... The connection between the purpose of the water, to bring in new light or energy into the world, was obvious to me..."

Through the use of symbol and metaphor, "Bill" came to know a world of the Other which led him to recognize the life force found in this forest system. Continued research could provide an understanding of how ABPE supports a scaffolding effect in the human cognitive process. Another pertinent question in the study: How does book knowledge contribute to the knowing of landscapes?

FINDING 2: The ABPE practice bridges the gap between the conscious and unconscious, the physical and cognitive experience in landscapes.

In Sees Behind Trees, Grey Fire says, "with your mind you stand outside the world and look in. With your body, you are inside already."[203] Grey Fire refers to this entering as being inside beauty. Perhaps being inside the spirit of the place is being inside one's heart.

Relationships of the heart are not well understood or accessed through the logic of a thinking mind. Intimacy speaks of feelings. In the ABPE practice, I connected to the thing I was intimately involved with through a heart connection. Grey Fire refers to this connection as being inside beauty, beauty that is felt, not seen.[204]

The ABPE image making process opened me to feelings I was not otherwise aware of, to an emotional intelligence. When I went inside my body and stepped outside my thinking mind, the feelings arose. The practice of feeling in my body means I have entered into the very essence of who I am, my spirit. When creating the image, this exercise bridged the gap between the spirit of the place and the spirit in me. Perhaps being inside the spirit of the place is like being inside beauty. When thought entered my mind, I again stood outside the world and outside myself.

Often feelings reside in the unconscious. For some, connecting with their feelings is very difficult. It takes a certain level of awareness to recognize feelings and another step

203 Dorris, M. 1996, p.52

204 Dorris, M. 1996

to bring them to a conscious level. The ABPE did this for me as well as for some of the co-participants.

At the multiple research sites, through the ABPE practices I was able to recognize the sentient language of the land, acknowledging all things have the capacity of speech expressed through code and gesture. I recognized and came to know the many nuances of the architecture of the sensorial symphony by stepping into it and speaking.[205]

In the abstraction process at Hominey Branch and Bainbridge Island, I note how it took many drawings to tap into my felt sense of the landscape. In the beginning levels of the abstraction exercise, I was unable to connect with a feeling state of the place and only after repetitive image making did I make the connection to an emotional knowing of the land. The emotional connection was an unconscious communication that was taking place between me and the land. Through the involvement of repetitive drawing, a relationship began to form, unconsciously. I trusted this process and it opened me to a magical dimension, a dimension that was not accessible to my conscious mind.

In the final stage of the abstraction process at Hominey Branch, my hands meticulously worked the materials in the construction of the collage. The decaying body of the sparrow emerged in the image on its own over time. The manifestation of the sparrow was an unconscious act. In the ABPE practice, a preverbal knowing rose to the surface of my awareness and presented as a conscious knowing. The image was a tangible manifestation of that consciousness.

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205 Abram, D. 1996

At the Santa Cruz River site, my imagination coupled with the raw sensation from the physical experience in the landscape led me to an exploration of worlds unavailable to sight alone. Sitting in the riverbed I experienced thunder as an electric sensation that traveled through my body. Felt it as a pulsing vibration against the inner edges of my being. Practicing ABPE connected me to the landscape, further creating a relationship through that connection. The practice of image making opened me to attend to place, to give my whole attention.

The ABPE practice puts me in a "state" where I loose track of the element of time. A dissolving of boundaries occurs between my spirit and the spirit of place. When I am inside this timeless dimension, I am not connected to my thinking mind. I am one with my body and the body of place. In my experience at Goose Pond, I united with the atoms of water by walking in water's solid form. The image articulated this feeling of being part of the spirit of the place. With each mark, the image became more clear and the feeling of oneness more complete. The ABPE practice allowed me entrance to the Umwelt of place and brought me closer to knowing the element of water. Through the practice of ABPE, I opened myself to the entrance of the Other, thus I came to understand water at a deeper level.

The practice of image making and dialoguing practices are examples of ABPE connecting the gap between the conscious and the unconscious, the physical and the cognitive. After practicing the image making in the snow at Goose Pond, I began the dialoguing process. My intentional questions were directed to the image. The answers

flowed. This stream of dialogue is evidence that I had tapped into a dimension beyond conscious thought. The image synthesized the dialogue between the land and me.

At Bainbridge Island, I created images of the shapes formed by the vegetation at the water's edge. I experienced the plants' morphology by recreating it in the ABPE facsimile exercise. In this process, I held the shape of the plant in my own body. The knowledge of the plants' growth patterns was embodied unconsciously. I sensed that the graceful arch created by the grasses held some meaning as to the growth of the plant. These exercises brought forth a knowing of the plants' morphology and the system in which it resided through a combination of intuition and embodied knowing.

I walked into the alder grove at the Bainbridge Island site and joined with the energy of the place. I began to feel the patterns in my body. In my conscious mind, I experienced them as if they were a choreographed dance. I created an image of the dance (see Figure 28). This feeling state represented another level of entering the place that goes beyond a Western science method of observation. The experience took me to a deeper understanding of place. When image making with the medium of oil pastel at Bainbridge Island (see Figure 29), I was literally immersed in the place through the physicalness of my hand and medium uniting. The ABPE exercise and choice of medium allowed me to explore the spatial dimension of place.

"Ann"—Bainbridge Island, WA

"Ann" believes that the trees have feelings and that she is able to relate to the tree's feelings through her heart. It is difficult for her to put her understanding of the trees' feelings into her culture's language. It is a little confusing to interpret her words at this point in the interview; I would need to go back and have further conversation with her. But this is what I believe she is saying: The trees have feelings, and she knows this through her feelings. She experiences and expresses her knowing through image making and dialoguing with the landscape. "Ann" speaks of feeling the trees' feelings. This feeling is manifest on the paper in the dialogue process. She is not confident, however, that she has the language to express those feelings, that she is using the right words to describe the "trees' feelings."

"Ann" is clear that in her dialogue with the trees, this feeling place resides in her heart. She speaks of this as heart intelligence and distinguishes it from brain intelligence. It is that heart intelligence or intuition that she vehemently trusts in and that allows her to "not think she is crazy" when having dialogue with the landscape.

"Carl"—Bainbridge Island, WA

Awareness of one's feelings can be triggered by outside forces, such as a sensory experience or a transitional object.[206] Another step in the cognitive process is the

206 Beres, D. 1965

translation of the embodied knowledge to a conscious level where the embodied knowledge is "fossilized" in the form of a symbol such as the image.

"Carl" entered the spirit of the place when practicing ABPE. "Carl" connected with the place emotionally experiencing the feeling of decay in his body. The image and written narrative was a way of symbolizing and memorializing the meaning of his experience. I am reminded that "Ann" spoke earlier about image making as a way people give meaning to their experience. She suggested that is the way of all art, ..."as long as it is making some sort of meaning for the person that is looking at it, isn't that the point?"

The Dialoguing Process

The "dialoguing with landscapes" and "dialoguing with images" exercises are key components of the ABPE practices. When practicing the dialoguing processes after making art at Goose Pond, I found the questions flowed freely. Each question led to another point for investigation and another level of understanding. All dialogues took place after initial image making. The ABPE practice bridged the gap between my conscious and unconscious, physical and cognitive experience. Examples of the dialoguing process in the co-participants' work show similar success.

"Ann"—Bainbridge Island, WA

When "Ann" practiced the dialoguing process, she recognized one has to be open to the dialogue in order to accept it as a means of knowledge. In the dialoguing practice, she honored the landscape's voice and wisdom. "Ann" recognized the process of dialoguing with the land as a multi-level process. The image making and dialoguing process allowed her to hear "more than one side of the story." Hearing only one side of the story, she says, would be the voice of a formal Western scientific investigation. In her experience, she acknowledged there are two sides to every story. The land's knowledge goes beyond scientific knowledge. By opening to the conversation with place, she is able to know both sides. In the combined practices of image making and dialoguing, "Ann" has tapped into the land's stories. "Ann" says she is able to connect to the place at a different level when practicing ABPE.

FINDING 3: The image created in the ABPE practice is a language, which communicates a tacit knowing through symbolism and metaphor.

The use and understanding of metaphor and symbol are integral to my work. The power of the metaphor as seen in the image is its capacity to suggest, an attempt to grasp, that which is unattainable in words and rational, linear logic. Metaphor helped me to hold in interactive tension the differences between compared objects.

Tacit knowledge is a knowing that is expressed through an internal felt sense. Tacit knowledge is invisible to the eye and is often difficult to put into words. Explicit

knowledge is visible to the eye and can be described through the cultures language. "The intuitive or the realm of the between"[207] are the bridge that connects the explicit and the tacit realm of knowing. In the ABPE practice, the image communicates intuition through a visual language. I was able to take an internal knowing of that which was invisible (magic), create a bridge between the external world of what I could touch (direct experience in landscapes) and the internal world of my sensing body (intuition).

Barbara McClintock expressed how time and patience were important in her research on maize genetics in order for her to really "feel" the organism.[208] McClintock's intuition was an "internal felt" sense of what she inherently knew. She experienced this in her body. Another unique quality of McClintock was that she was able to translate her intuition. Her feelings helped her to recognize the patterns in the maize.

Aldo Leopold uses metaphor extensively in his story "Odyssey" to suggest the linear logic in evolution.[209] Through narrative, we follow the story of X, an atom, as it travels across the American prairies of the Midwest. X begins his travels locked in a limestone ledge since the Paleozoic seas covered the land. X continually regenerates through the transformation of living matter. "He helped build a flower, which became an acorn, which fattened a deer, which fed an Indian, all in a single year."[210] Leopold helps us to grasp the complexity of temporality through his use of metaphor.

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207 Polanyi, M. 1983

208 Fox Keller, E. 1983

209 Leopold, A. 1972

210 Leopold, A. 1972, p. 104

Practicing ABPE at Hominey Branch brought forth a knowing to my adult sense, the intuitive knowing I had of this land place as a child. Through the ABPE abstraction process, the concepts became concrete and tangible (see Figures 22 –31). The image took one frame of earth's processes, freezing a particular moment in its evolution. Abstraction of the subject was key in this process, as it metaphorically represented the evolution of the place itself, moving beyond what I literally saw. The image became the voice, which spoke what I could not articulate in words. The image as a figure of discourse took these seemingly unrelated and incompatible phenomena and, through their juxtaposition, produced a representation of this new semantic.

In my work at the Santa Cruz River, I was drawn to the area of tension between the green emerald patch of healthy Freemont Cottonwoods standing along the edge of the river basin and a group of denuded cottonwoods further from the water source (see Figure 6). One must be open to intuition and be willing to act upon that knowing. There was something I could feel about the tension at this site but I was not clear as to its meaning until I began the image making process. Without my being conscious of it, the image began to look like a landscape covered in the decaying carcasses of mammoth African elephants "... like bones scattered across the landscape, femur, tibia, so too lay the broken limbs of the cottonwood in various stages of decomposition piled high on top of one another." In this landscape, I was sensing the feeling of death within my body.

On a conscious level, I would not have thought to speak about the trees limbs as bones, but I was able to make this connection though the image making process. The

image framed and articulated my understanding of death and bridged the gap between tacit and explicit knowing. I have had several experiences in my lifetime of viewing whitewashed animal bones strewn across a landscape. The image gave meaning to my experiences, past and present, and furthered my understanding of the health of this system.

At Goose Pond, I attended to the natural history phenomena display at the base of the trees—perfectly shaped circles of melting snow (see Figure 20). From this focused attention came questions that led to ideas that furthered my thinking. In the physical aspect of making art with my feet, original thought evolved, questions of form and substance emerged. I looked at the integral places of connection, the tension created at those intersections, considering the snow circles as the metaphor for interconnectedness. The image making opened me to follow my intuition and trail of thought, opening me to ask good questions. "What is the connection telling me? Is there an equation for the melting of solids to liquids that includes volume and time?" Not being a physicist, I could not answer the questions, but I recognized it was only through the physicality of image making that a physics question even entered my mind.

"Ann"—Bainbridge Island, WA

In the image making process, "Ann" used a symbol language to express the gestalt of the tree (see Figure 17). In her writing, she used metaphor to further her understanding. "The cedar tree…I remember looking at that and thinking that the limbs of this tree are like

the back bone and the individual branches coming off are like the ribs and it has multiples of them, many, many backbones."

I asked "Ann" what the use of metaphor did for her understanding and her construction of knowledge. "Metaphor helps me to understand the tree better. Looking at its shape in a new way. Making that metaphor about those branches helps me to look at the tree in a different way because it appeared different after I looked at it that way. Again it is one of those things that I just don't have the words to explain it. It helped me."

In the interview, "Ann" said she could know something because "I can know it as I know my own body." I ask "Ann" how she knows what she knows when metaphor is the translation of that knowledge.

> "I have the knowledge to know what my ribs and my back bone are, so there is no way that I would be able to say that is what is on that tree because I know I am not that tree. The metaphor is based on what I already know myself so I know they can't be translated into (something else).... If I had created a meaning using words I did not know, then that metaphor would have had no meaning to me. I had to base that metaphor on something I knew to begin with. I know what my backbone does and I know what my ribs do; therefore, I am able to get meaning out of that metaphor."

Although "Ann" is comfortable using words, I believe her visual language also supports her tacit knowing of ribs and backbones (see Figure 17). This is another area where more research could provide further understanding of the pluralistic knowledge processes of the individual.

"Ann" states multiple times in the interview that she does not have the words to describe what she feels or what she knows as a result of this experience. Yet she knows

that she knows it. In our conversation, I spoke about how the image making took me outside my thinking mind. "Ann" used the term the scientific mind. Both of these terms refer to the logical, rational mind. "Ann" admits it does get confusing understanding where the knowing originates.

> "Like with my scientific mind I know, I don't even know if it is my scientific mind. Like when I was teaching kids about cedar trees that was something I drew their attention (the gestalt, the J shape of the cedar tree) to because it was something that I had noticed. So I don't know if it is from my noticing it (through the art process) or from scientific knowledge, it's where it all gets mushy, kind of gray area. I don't know where it comes from."

"Bill"—Bainbridge Island, WA

"Bill's" experience at Bainbridge Island is another example of the image communicating a tacit knowing of the landscape through symbolism and metaphor. "Bill's" use of images as symbols and metaphor translated his intuitive knowing of the water cycle (see Figure 19). "The little water droplet clung to the lush moss with all the energy it possessed ... it looked like something else entirely, not just a water droplet in the sun but almost a woman in a skirt giving birth. The droplet just hung there still attached to the moss but would eventually fall and sever the ties as do all infants at birth." The multi-level practice of ABPE gave meaning to "Bill's" experience. The outcome was a deeper understanding of the interconnectedness of water and the life cycle found in this one ecosystem.

Summary Research Question 1

There are always two-sides to every story: the world as perceived by the organisms in the land and one's own ecological perception. The land is composed of other experiencing beings.[211] As humans we are a part of this matrix of life, embodied through our sensory experience. We are always connected to our environment: through our lungs in constant exchange with the air and through our feet firmly planted on the ground because of the gravitational pull of the earth.[212] The body is the connection: not through a solitary or passive engagement, but through an active, reciprocal engagement of "being" in the world.

The ABPE practice accesses one's embodied experience, bridging the gap between one's tacit and explicit knowing. The ABPE practice taps into the unconscious, heightening and coding one's intuitive knowing through a symbolic art form: the image. The image, a tangible record of the underlying conversation between humans and the landscape, is not a representation of this conversation. It is the language itself: the exchange between all experiencing beings. The image is unique in the conversation, as it cannot be spoken in any other language.

211 Abram, D. 1996

212 Gibson, J. 1983

Research Question 2

How Does the Image Created in ABPE Reveal the Land's Stories and Lead One to Clues of the Evolutionary History of the Land?

Each step of the ontogeny of a living organism is recorded as a point, a representation of the static result of the dynamic equilibrium of the organism's growth. Multiple points become patterns. From an ecological focus, the land's stories, the interactions between and amongst organisms in the landscape are recorded as patterns. Patterns are a tangible record of ordered relationships found in a particular system at multiple scales. An ecologist understands these patterns, the land's communication system, as they are a reflection of environmental change. Change over time creates the evolutionary history of the landscape. The ability to read and understand the patterns provides the ecologist with data that represents change in the structure and mechanisms of the land, which could provide clues to the evolutionary history of that landscape.

FINDING 1: The ABPE practice provides a shift in awareness, opening the participant to detail in the landscape at scales previously unnoticed, through sensory capabilities beyond sight.

As a child, I lived in a magical space where everything was alive. In my imagination, nature was the supporting cast for my unrestrained story. One day the white-tailed deer was the main character in the story, next day the bark of the shagbark hickory tree held all the world's mysteries. I recognized that I was but one intelligence in a vast

ocean of Others.[213] Abram says that not only was I experiencing and perceiving all animate beings in the landscape, but also so, too, were they experiencing and perceiving me. It was a reciprocal relationship.[214] In this place of magic and the fantastical, I opened to the space, which was informed by my intuitive sense bringing forth a "knowing" from the world of the Other.

As a child I was closer to the "magic" that allowed me to live between worlds. As an adult I was able to enter the magical space through direct experience with the landscape and by practicing ABPE. The physicality of this phenomenological experience shifted the boundaries of my perception. By opening to the "magic" I opened to an ecological perception of the landscape, which presented me with an experience of knowing relationships across and between boundaries of underworlds and over worlds.

Cutting through the cultural constructs I have acquired as an adult in order to get to this childhood knowing was not easy. I cannot articulate how I did this, except that the practices found in ABPE led the way. As an adult, I got in touch with my embodied, intuitive knowledge experienced in childhood through the abstraction exercise. Direct experience and the image making, coupled with magic, intuition, and imagination created worlds unavailable to me through "sight" alone as revealed in the final image, using the medium of collage (see Figure 5).

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213 Abram, D. 1996 Independent Others are our ancestors, mammals and primates. Independent Others are a part of the animate beings of the landscape. Animate does not only refer to that which we know to be alive, animals, but all phenomena as it calls us to participate through our senses, as it influences and engages us bodily.

214 Ibid

The multiple steps in the ABPE abstraction exercise led me to detail unnoticed when I first entered the site at Hominey Branch. I began with the naturalist drawing. It was an accurate depiction of what my eyes saw, but it did not connect me with a feeling to the landscape. When practicing the ABPE abstraction exercise, layers and levels of my view peeled away. As each new image emerged, I no longer recognized the familiar, what I was seeing in front of me. This perceptual shift caused the subject to take on new associations and new meaning. The shift also changed my focus to that of the relationship-taking place between subjects. This aligns with whole systems theory: when the whole is broken into parts, the focus moves from parts and whole to object and relationship. The relationship includes the artist/researcher. The image making was the synthesizer, creating a holistic relationship.

In the abstraction exercise, the artist/researcher deconstructs what is in her immediate view. This brings to awareness the essential qualities of the landscape that are inaccessible by only traditional science inquiry. The image making connects with the intuitive sense housed in the body that comes from a phenomenological relationship with the systems being studied.

With the stripping away of the familiar, I began to really sense beyond what my eyes alone could record. The image translated the felt sense of the place (the gestalt), as well as my sense of the magic and mystery of this place. Each new perceptual shift in awareness opened me to the multi-scales of the landscape, which revealed networks nested within networks.

At the Santa Cruz River, I was aware of the approaching storm through an intuitive sense housed in my body that came from a phenomenological relationship between my body and the body of the place. Intuition and smell were other sensory modality that I used beyond the sense of sight and sound.

Primary to the practices of ABPE is the image making, but other key components include intuition, imagination, and the "dialoguing" exercises. I created images in my mind as a way of understanding and making meaning of my experience. Adding imagination, I was able to travel through time while still being situated in the present. Another exercise I explored was shifting my focus of awareness in the landscape. When I moved my focus from the micro to the macro, I was able to explore multiple spatial dimensions in this one landscape. When I brought these two exercises together I was able to open to the nuances of the ecological vernacular of place.[215]

Experiencing the world in this way could be associated with attaining a clairvoyant state of fusion with the enveloping ecosystem, or it could be considered time travel, projecting one's self into other dimensions. Imagination is the key to reaching this state of fusion, as it creates an imaginable space that allows one to follow a temporal trail.

When I merged the image with the practice of imagination and ecological perception, I was able to juxtapose a temporal scale of past and present. Through the

215 See Appendix A; Working Definition of Terms

practice of ABPE I became a time traveler in the desert landscape of southeastern Arizona. Imagining the land's story over time as a visual narrative proved an excellent way of expanding and contracting my perceptual boundaries. Interpretation of these stories through image making provided me with frames of reference and context to a temporal exploration, providing a deeper understanding of this landscape.

In the act of making images, I transcended the plane of consciousness and entered the realm of imagination. My boundaries were permeable, yet my experience was not a dream or found in the plane of reverie.[216] I did not imagine myself in this place, a fictitious character in a land of make-believe, but I was literally infused in the place, through the smells, sounds, tastes, and textures found in the landscape. The image concretized this imaginative state.

When I practiced imagination in the landscape, my imagination allowed me to fill in the "unknown" with stories of probability and speculation. These imaginative stories led me to "what if" questions in regard to past and future environmental changes in the landscape. Coupling direct experience in the natural world with imagination and image making offered a heightened awareness to the way things must have been and allowed me to speculate on how environmental conditions might factor changes in the landscape over time. Imagination gave shape and form to the unknown. My imagination allowed me to test what I felt (intuition) but could not see (magic).

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216 Bachelard, G. 1983

The image I created worked as a springboard for my imagination to explore worlds beyond sight alone. The image became a graphic record from which I could explore the landscape. At Santa Cruz, I imagined a desert floor filled with colors and textures. What can I know about the land's stories based on the color palette of the landscape? The image in my mind's eye led me to ask questions about what birds might feed here, based on what I knew about avian adaptation. And the soil and plant color led me to ask questions about what minerals are found here and thus what plants grow here, because they provide the food source.

At the Santa Cruz River, in the act of making images, I began my "what-if" questions. If the vibrations were brought about by a change in the molecular structure of atmospheric gas, how could I know that? Perhaps I could sense the patterns of disturbance in the sound waves, or in a change in the molecular structure of atmospheric gas. I cannot know the answer to these questions at this time in my investigation, but I do recognize the ABPE allowed me to connect to an intuitive sense providing clarity to my investigation.

Another shift in my awareness was created when practicing the ABPE shadow exercise at the Santa Cruz River site. This exercise allowed me to connect with my felt sense of the changes that were occurring in the land. When outlining the shadow of the plant, perhaps I sensed internally the earth's movement. It was not a logical sense, but some intuitive sense of a phenomenon much greater than my logical mind could frame. Once I saw the progression of the movement as I flipped through the journal pages (see Figures 8-13), the phenomenon of earth's movement was made tangible. I questioned the

wisdom I could know about the plant, about this ecosystem, based on the code imprinted as a shadow on the desert floor?

Through the shadow exercise, I was able to mark a temporal dimension of the landscape revealing the past while remaining firmly grounded in the present. I came to understand that the image on the journal page was symbolically representing frozen time. Literally, the image of the shadow represented one point along the course of change in earth systems. The shadow was a graphic record of a fixed point along the path of change.

Reflecting on the shadow drawing exercise, I recognized the magnitude of this phenomena as it unfolded all around me. "Phenomena in ecology, as in science in general, are manifestations of change; there can be no phenomena if everything is constant."[217] In my exploration of movement in the desert landscape, detected through my sensing body, I was aware of the change that was occurring right before me. However, I was not able to name it in words. In the shadow exercise, I took one frame of earth's processes and created a record of that change. The image concretized the temporal dimension, time frozen on my journal page. Movement is a recorded journey from past to present. Thus, the image provided me with clues to the evolutionary past, but also gave me information to speculate on the future of this landscape.

The outcome of the image making in the shadow exercise lent me a sensory impression. This led to an understanding of the cycles of the earth, moon, and sun that I had never experienced before. I felt so small. Such a wonder that the gravitational pull of

217 Allen T. and Hoekstra, T. 1992 p. 15

the celestial bodies could be felt in my body and then was made tangible through the mark making—by drawing the coded shadow on the page. I was always fascinated by the models in grade school of the earth, moon, and sun traveling on an axis, but I never really got it. Now, I got it.

At Goose Pond, I practiced a perceptual exercise by squinting my eyes. Then, when I added imagination to this exercise, the woods transformed into a vast liquid pool where the circles at the base of the trees looked like concentric circles created from a pebble thrown into the body of water, sending out ripples across the mirrored landscape (see Figure 20). Imagination gifted me the possibility of "sensing" what was not immediately present. Envisioning the landscape as a body of water, I experienced a shift in my awareness. The combination of ABPE and imagination opened a space within me for new learning possibilities.

Practicing ABPE at the site on Bainbridge Island, I was constantly assessing the quality of the dimensions of the landscape: the dimensions of space, light, and movement. Hillman says dimension is a measurement of the essence of our experience and enters our body through our senses.[218] I was measuring the quality of these elements not only through sight, but also through other sensory systems, which were constantly regulating in response to my environment. The image making gave me a new understanding of the landscape. In the process of ABPE, a reciprocal relationship was formed between the land and me.

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218 Hillman, J. 1989

In the ABPE facsimile exercise, I was not trying to replicate what I saw in the landscape in front of me; instead, my images were creating a "feeling state" of the landscape based on my phenomenological measurements. As I continued through other ABPE exercises at this site (see Figures 21—31), the shift in awareness brought about detail in the landscape that I could not even have fathomed without first making images.

I began to consider the "space in between" subjects in my visual field (see Figure 26). This led me to study the middle canopy, and I began to consider the processes of the water cycle, precipitation, and respiration. In the image I transposed the body of water, the glen found on the forest floor, to the middle canopy of the alder grove. I am not sure why I did this, but my intuition told me to do so (see Figure 27).

In the image making, I was able to record the essence of the event that was taking place in the landscape. The energy of the forest system traveled through my body, out the ends of my fingers to the image on the page. In the practice of ABPE, I was responding to the patterns that made up this multi-scale landscape.

"Ann" – Bainbridge Island, WA

"Ann" says it was the image making that helped her to notice all the things in close proximity to her (see Figures 14 –18). "If I hadn't been making art, I don't think that I would have looked so closely at the space around me." Practicing ABPE, "Ann" experienced a shift in her awareness, which opened her to detail at scales she would not have noticed otherwise.

On "Ann's" first time at the research site, she noticed the detail of the landscape, which gave her a sense of the gestalt of the place. She said her conversation with the trees and plants "was about these things that are always there versus things that come in and leave, kind of like the feeling it gives the place." The ABPE practice helped her to slow her pace and practice a focused attention. "I feel that was a very important piece of it, when I was listening and I was smelling and feeling." She was noticing the changes in the landscape as they transformed the place. "Ann" referred to how the first time out she took in the feeling of the whole place, and the second time at the research site she looked out beyond and noticed all the alders that were around this little pond.

When "Ann" speaks about her experience making images of the cedar tree, she acknowledges she was able to know the tree through its gesturing. The tree spoke to her. She was able to know the tree through a felt experience that came from the ABPE experience. "Later, I was better able to identify the tree better just because of what I noticed when I was more focused on it." "Ann" acknowledged earlier in the interview that it was the image making that helped her to notice the detail she did.

"Ann" says she is very connected to words. In her writing, she expressed her feelings at the site. She says it is through the words that she is able to go back at a later time and re-enter those memories of the rain and wind. When I asked her if these feelings come to her in the same way with the visual language, she says no, she does not think so. However, she speaks about how the color palette allows her to recall the quality of the

dimension of light. The dimension of light is a sensory experience, yet she maintained that in order to reconnect with her sensorial experience, she would need to use words.

I find the juxtaposition between image and words notable. As a viewer, when I experience "Ann's" work, the outcome is significantly different. The image speaks to me more clearly than the words. "Ann's" mark making shows an aggressive energy, and the interplay between major forms expresses a tension (see Figure 18). I get a feel for the struggle, the competition between species at this site by looking at her marks. In this image I no longer recognize the familiar, which leads me to new ways of thinking about the landscape. The words create a pre-existing image in my mind's eye that does not lead me to an immediate "feeling state" of the landscape. I am not trying to interpret "Ann's" images. However, I can interpret a sense of the land's story through "Ann's" visual language. This would be another area for further research. Perhaps a more involved training regime would support different outcomes for the artist/researcher.

FINDING 2: In the ABPE practice, the participant's body in motion is kinetic energy participating in an energy exchange with the landscape. The image is the energy made visible.

One of the major keys to knowing the language of place lies in the process of energy exchange. An energy exchange occurs between the landscape and me when making images. In the Evolution chapter, I define the systems thinking view of cognition:

living organisms' awareness of the changes in their environment.[219] I go on to describe Ernst Haeckel's view of the ontogeny of the organism: every organism is a recapitulation of its ontogeny and therefore holds that knowledge within its own structure.[220]

The landscape is constantly talking to us. The gestalt is the static expression of the essence of energy systems found in the landscape. As I got further into the abstraction exercise at Hominey Branch, I was focused on the gestalt in front of me (see Figures 3-6). I considered the process of energy exchange involved in creating form and matter at this site. What I saw with my naked eye was the static result of the energy exchange or beauty.[221] I named these in my thinking mind as a creek, ledge, and pool of water. Through the image making process, my body became intimately involved with the creation- taking place in the landscape. My body responded to the gesture: water spraying over the rock ledge. My felt sense of the dynamic equilibrium-taking place in the land resided in my body. The image carried the reciprocal experience: the land's energy and mine. As I pushed the ABPE abstraction exercise further, the image making created an awareness of the dynamics taking place between subjects in the landscape. The continuous mark making was primary to my awareness, bringing my unconscious and cognition to the forefront of my awareness.

The ABPE shadow exercise began with my fascination of trackers reading animal tracks. The track provides clues to the relationship between land and animal. At the Santa

219 Capra, F. 1996

220 Haeckel, E. in Breidbach, O. 1998

221 Vernadsky, V. 1998

Cruz River site, the cast shadow of the plant's leaf held clues to the relationship between land and plant. The shadow held the static clues to autopoiesis, the plant's growth. The image, as a graphic record, furthered the communication of the sensory exchange that took place between the energies of this place and me. The subject in my image, the leaf and its shadow, were patterns to which I responded.

My response was the act of making marks on the page. In this act, a relationship was formed. Patterns of participation were laid down in my cognition. Practicing this exercise, I came to realize that it was not just about the plant, but it signified a much larger system dynamic, the relationship between organism and energy source. The cast shadow expressed the energy exchange-taking place in this one moment in time. The plant's shadow held knowledge similar to how the animal track held knowledge for the tracker.

In my work at Goose Pond, the instrument I used to make art was my body in motion: walking circles around the base of the birch trees. Through the physical movement of walking the land, my body's kinetic energy was mimicking the patterns that formed the phenomenon of the melting snow. The image created in the ABPE practice was a recapitulation of the patterns of place. My body and mind were working together as one through an energy exchange with the landscape as my cognition was constantly responding to the changes in my environment. In the act of making the image, the continuous working of my hand or body forms a relationship between the subject and me. The outcome is knowledge otherwise unavailable. By practicing the facsimile exercise, I entered the land through its own dynamic equilibrium, its own energy. I became a part of

that landscape by "... uniting with the atoms of water, by walking in its solid form."[222] This exercise helped me to be more aware of the underlying mechanisms of this site and opened me to ask good questions.

In this example I used the materials of the site, the snow in collaboration with my body to produce the image. I am not sure how I knew to do this. My intuition told me that the most direct way to engage in communication with this landscape was to engage my full body. I was aware of the movement of my body as I began to walk circles around the trees. The creation process, forming matter with my feet, mimicked the creation process at this site. A connection was made between the circulatory system of my body and that of the earth's. The ABPE practice bridged the gap between the land and my conscious and unconscious, physical and cognitive experience in the landscape.

At the Bainbridge Island site I was drawn to the paradoxes of the site, edges and borders juxtaposing systems. I explored the spatial dimensions of the site through the ABPE exercises. My attention was drawn to the circle of energy. The energy exchange took place as it traveled through my arm and out my fingertips, the image became the visual narrative of this energy exchange (see Figure 30).

When I stood among the grove of alders, I sensed them as if they were a dance. My image depicted the placement of each young alder as if it were a step in the choreographed dance (see Figures 26 and 28). Creating the image allowed me to know the

222 Woolery, L.A. 1999

physicality of each tree. Through the ABPE exercises, I experienced a perceptual shift, framing a new perception of the place.

The graceful arch of the grasses at water's edge is the gesture, which speaks of the static result of the dynamic equilibrium of energy systems moving. When practicing ABPE, I recognized these patterns of a moving system on an unconscious level. The energy exchange that took place between the landscape and me furthered my recognition of the patterns (see Figure 25).

I am curious about the feeling in my body when I am engaged in this repetitive movement of mark making. My drawing became an extension of the recapitulation of the pattern of growth—the plants' morphology. The question arose: "What can my hand know when it mirrors the gesture of the grasses?" Actively engaged with the landscape through the making images, I recognized that my body was the location of the connection between the land and me

"Ann"—Bainbridge Island

"Ann" pushed the abstraction exercise through repetitive image making until she got to the essence of the place. In Figure 19, "Ann" depicted the relationship between specific objects in her visual field, energy flows depicted as points of tension juxtaposed to points of confluence. I do not know if "Ann" interpreted her drawing in the same way. I sense she had an intuitive feel for the points of energy.

"Bill"—Bainbridge Island

"Bill" created multiple images of the old stump. The image carried the energy exchange of the stump in the landscape and his energy exchange with the place (see Figure 19). He came to understand the energy necessary for autopoiesis and the relationship between energy flows. For "Bill" the image and his written narrative made his understanding visible.

"Bill's" experience at Bainbridge Island is an example of the kinesthetic motion that occurs in repetitive mark making. Through the multi-level practice of ABPE, "Bill" came to a much deeper understanding of the hydrogeochemical cycles of the site. The image making was an element in bridging the gap. Further research could shed light on whether one level of ABPE or another supercedes a deeper knowing of landscapes.

Summary Research Question 2

Patterns' are markers, recognizable measures of interactions that point to structural change in the landscape. There may be similarities between autopoiesis, the creative process in the development of structural foundations in the landscape and the creative process of image making.

This duality may be recognized in the act of making marks on the page: energy is expelled and a relationship is formed between the artist/researcher and the place. Patterns in the landscape are representations of "points of energy" also recognized by the ecologist

as places of "structural coupling:"[223] telling indicators of the changes that have occurred in the landscape over time. The image created in ABPE is a visual narrative of the knowledge held in place: a recording of the patterns of participation, the energy exchange between humans and the landscape.

Locating ourselves in these energy points through the practice of ABPE unleashes the possibility of "becoming" the white-tailed deer or the microorganisms buried deep beneath the forest floor. Entering the place through its own dynamic structures, the practice of ABPE takes the artist/researcher from a passive to an active participant in the landscape.

Research Question 3

Are the Patterns Discovered in the ABPE Images Meaningful to Gaining a Deeper Understanding of a Place?

FINDING 1: The ABPE practice takes the participant to another level of knowing and understanding the landscape.

Patterns are the language of the landscape, codes of the land's communication system. One speaks the language of place through an awareness of and an ability to read patterns. Knowing the language of place takes one to another level of knowing and

223 Capra, F. 1996

understanding the landscape. Research findings indicate that ABPE practices access patterns found at multiple scales in the landscape through human capabilities beyond the sense of sight. The human capabilities that avail one to know the language of place are: a tacit knowing, intuition, an embodied knowing, imagination, and an emotional knowing. ABPE practices communicate the land's wisdom through the language of the image by creating a bridge between the conscious and unconscious, physical and mental experience with the landscape through an exchange of kinetic energy.

Perception, a bodily engagement with the patterns and gestures of place, is a reciprocal participation with place.[224] The active relationship is taking place between one's own flesh and the sensuous flesh of the biosphere. Entering the landscape as its own realm is key if we are to know the specifics of its creation and changes. Observing young children at play may give us an understanding of the participatory relationship I am describing. The child's means of building knowledge is "knowing by becoming" through "direct organic participation of the perceiving nervous system in systems of nature."[225]

In his book, Traces of An Omnivore, Shepard says the body, as organism, is the archetype of connectedness. "Therefore when our bodies move into the space of the Other, we test the self, lending it through imagination as the Other, bringing it back into the self as the human organism."[226]

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224 Merleau-Ponty, M. 1962

225 Cobb, E. 1977, p.33

226 Shepard, P. 1996

At Hominey Branch, the abstraction exercise helped me to recognize place as a process, not coordinates but the relationship between systems, hydrogeochemical systems.[227] ABPE allowed me to enter an "abstract time," as Bachelard describes memory, in order to recover the "fossilized specimen."[228] The image revealed the land's memory communicated through patterns and led me to know another level of knowing the landscape.

I entered the image through the bodily making of the image, which allowed me to return to the original wisdom of the place. Knowledge resides in the context from which it has been abstracted - the landscape.[229] The image carries the knowledge.[230] The image led me back to the context from which the knowledge came.

Looking out across the riparian ecosystem in southeastern Arizona, I encountered examples of pattern language at every scale. To my unaided eye, the patterns presented themselves as the beetle's etched path along the interior bark of the downed Freemont cottonwood tree and the spring thermals outlined by eight red-tailed hawks. Practicing the ABPE shadow exercise in the Santa Cruz River, I moved beyond an observer-based inquiry and instead went to the essential life of the scene. This brought me closer to the reciprocal participation Merleau-Ponty calls perception.[231]

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227 Shepard, P. 1996, p.209

228 Bachelard, G. 1964, p. 9

229 Shepard, P. 1996

230 Hesse-Honegger, C. 2001

231 Merleau-Ponty, M. in D. Abram,. 1996, p. 128

In the image making process, I began to shape and form the significance of the phenomenon based on an intuitive knowing. In the imaginative state, I was able to relax reason and intellect and instead let emotion and intuition move into the foreground of my consciousness. The image provided a means in which to make concrete the edges and boundaries of juxtaposed scales. Building upon the knowing gained from the shadow exercise with ecological knowledge, I came to know the relationships between various rhythms and cycles of the biosphere.[232] The perimeters of scale I experienced spanned the breadth of the phenomenon to the stratosphere and beyond.

At Goose Pond, I first entered a spatial relationship with the beech tree grove in the transition forest. When I entered the view before me—the snow covered landscape through its own dynamic equilibrium, its own energy—I became a part of that landscape. This is an example of a perceptual experiment with scale.[233] I experienced another level of knowing that I had not been able to attend to prior to making art. By creating the story of earth's circulatory system in visual narrative, by walking the landscape, I drew myself into the land's story. The ABPE practice led me to recognize the complex patterns of place through an emotive, intuitive, and embodied process. The image, circles in the snow, articulated the very essence, the patterns of the landscape. ABPE gave me a means to become the model of the place itself. I entered the water's solid form with my body and I

232 Vernadsky, V. 1998; Krafel, P. 2000

233 Thomashow, M. 2002

began moving with it.[234] The image was a visual manifestation of the transference of energy between place and myself.

This exercise at Goose Pond provided an understanding of an ecological perception[235] of place and the relationships among organisms' found in that environment. In the act of drawing the graphic facsimile, I was living the experience in the moment, living organisms' multiplying by recreating the phenomenon in exact detail--every point, line, and shade of color. The image was a "facsimile" of the form and shape of the structure, the landscape, which characterized the reality, state of mind, and condition of the land at that moment in the evolutionary history of the landscape. My ability to "fluently speak" the pattern language of the landscape led me to the knowledge held within that one concentrated system, the riparian ecosystem.

Anytime I am intentionally making art in the landscape, whether I am drawing, painting, or sculpting, I am actively living through an ecological "event." Each image or collection of marks becomes a visual graphic record of a raw sensation that I collect when perceiving the event.[236]

Practicing the facsimile exercise at the Bainbridge Island site I came to recognize and understand the energy absorbed and expressed through the gesture of the arch. I experienced the build-up of organic materials, its' smells and textures, through my body.

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234 Abram, D. 1996

235 Gibson, J. 1983

236 Rhyne, J. 1984, p.5

When I opened to the world as being alive, I experienced an exchange of sentient expression between all independent Others and myself.

Perception is a communication, the recognition and interpretation of sensory stimuli, an interchange of expression between one entity and another. Perception is a silent conversation that unfolds beneath my conscious realm.[237] The ABPE graphic facsimile exercise creates the embodiment of the subject at a level and depth not available through only a Western scientific inquiry. The graphic facsimile relies on a phenomenological perception of landscapes coupled with embodied intuitive knowing.

Patterns in the landscape avail themselves to me through sensory exploration beyond the sense of sight when practicing ABPE practices. When practicing the graphic facsimile at the Washington research site, I projected myself into the subjects of my view, allowing the intelligence of my body to know and express the phenomena of this landscape, the phenomenon being what Vernadsky calls, "the creative wave of organic matter"[238] (see Figures 22, 29, and 30).

How does one enter the species space as E. O. Wilson practices?[239] Again I practice what David Abram sees as a way to learn and speak the vernacular of the landscape, "enter the language with your body and begin moving within it."[240]

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237 Rhyne, J. 1984

238 Vernadsky, V. 1998

239 Thomashow, M. 2002, p.83. Thomashow speaks of naturalist, E. O. Wilson's great respect for the species he studies. This practice is attempted by entering the species space of other creatures through: data collection, observation, sensory awareness, or empathy. This shift in perspective brought about by these practices is common to many shamanic hunting rituals.

240 Abram, D. 1996, p 82

Further I notice that what comes forward in time in the process of the image making is a gentle melding of my mind, body, and spirit with the spirit of the landscape. The translation of the arch, ecologically, tells me the arching shapes represent the static result of the hydrogeochemical systems. To understand these complex patterns, I consider three levels at once when I explore the edge or boundaries of the systems: 1) a wetlands nested within a forest system that sits at a high elevation; 2) the mechanism, the hydrological cycle; and 3) the level above that gives context, the moderate NW temperate rainforest.

The multiple exercises in the ABPE practice bring me to a new level of understanding the Other—Other being the experiencing bodies in the landscape such as the trailing blackberry, the Freemont cottonwood or the winter wren. By practicing the ABPE image making exercises, I can come to know the animate landscape as Richard Nelson says in Heart and Blood, by living the experience in my body, "how the deer moves, thinks, and lives in the forest."[241] My body is a mirrored reflection of the patterns, the language communicated through the land's body. The image translates and articulates the conversation.

My experience at the research site is truly an example of "patterns of participation." "Patterns of participation" are the exchange or interchange of energy, the relationship that occurs through the dynamic equilibrium of movement. This relationship includes the artist/researcher.

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241 Nelson, R. 1998

"Ann"—Bainbridge Island

"Ann" says she notices patterns by noticing the gestures. "I notice, the way the cedar limb swoops, the shape of the ferns, then the snag, it has all of those little sharp places that used to be the branches. I don't know how they changed my image making. I feel that in some way I was drawn to them. When you look at the images, those patterns show up in most ... of my images."

"Ann" believes making images helped her to notice the patterns, and this process led her to a deeper understanding of the place. "With the cedar tree I think it did. The patterns in the branches are what I was telling about earlier, telling me something about it. The cedar tree with those branches and their swoopiness, somehow that told me more about the tree. I just don't know what it is." Again, "Ann" struggled with finding the right words to describe what she knows.

"Ann" clearly recognized there were different levels of understanding available through the ABPE practice. Upon entrance to the place, she says her knowledge of the land is based on what she calls a surface knowledge, her ecological book knowledge as it is translated on the landscape. Then as she began to practice ABPE, she described the knowing as this: "...looking at it from the next level down, a deeper level would be what can the landscape tell me, and then the next one down would be listening to what the trees are actually telling you."

The ABPE is an inquiry process that taps into an inner dialogue between the self and the landscape. "Ann" talked about how questions arose when practicing ABPE. "And

once you listen to this tree, more questions may come up and then you are able to move to another level where you can take even more from that landscape." "Ann" acknowledged that she could not go to this level of understanding the landscape with only her formal science education. The pluralistic methodology of ABPE, combined with science, led her to a deeper understanding of the place.

Summary Research Question 3

Making images through the practice of ABPE is a continuous build-up of the medium through the act of layering over time, while simultaneously the practice of deconstructing form and matter is seen in the abstraction exercise. This practice leads one to the very essence or the "gestalt" of place. Thus the process of image making may be a metaphoric representation of the structural development of landscapes, "the continual bringing forth of a world through the process (*act*) of living."[242] (Italics mine)

Our ancestors' ability to read the gestalt and thus patterns in the landscape is evident in the art of tracking.[243] The image, created in ABPE is a visual language of the patterns of participation between humans and the land. Thus reading the patterns in images leads one back to the knowledge found in the land: the story of the coyote in the dry riverbed as it stalks its prey, the injured field mouse.

In the third research question: are the patterns discovered in the images meaningful to gaining a deeper understanding of place, I may be implying the wrong action, reading as

242 Maturana, H. and Varela, F. 1987

243 Liebenberg, L. 1990

it leads to discovery? The discovery of patterns in images may not come through the reading of patterns, but may come through the act of "embodying" the patterns. Projecting one's self into the subject being studied is considered by many as the art of "becoming:" ...where "mind and world arise together."[244] The image articulates in symbol this holistic process: the synthesis of one's mind, body, and spirit with the spirit of place, which could lead one to a deeper knowing and understanding of place.

Final Summary

Animals and plants have the capability of understanding phenomenon in the landscape and communicating their understanding both within species and across species. Scientists are aware of some of the phenomenon, such as acoustic emissions, bioelectrical charges, and the electromagnetic spectrum, which are unavailable to the naked human eye, but available with the help of technology. My investigation focused on how the image and the image making process practiced in ABPE leads one to experience and know phenomenon in the landscape through a means other than a Western scientific methodology.

In this study, I have seen through the experiences of others and experienced myself a communication that takes place between the human species and the animate world. The

244 Varela, F. et al. 1991 p.177

results of the study show humans have access to a pre-discursive language through ABPE, which opens them to a language with the landscape at multiple scales. As with all forms of communication, there are different levels of success.

Different Levels To the Practice of ABPE

Common to the researcher and co-participants' work is that ABPE bridges the gaps between the conscious and unconscious and the physical and cognitive experience. This suggests there may be a scaffolding effect taking place in the knowledge construction due to the various intelligences the exercises tap into. There are also multiple levels in the translation of the art language to the culture's language.

"Ann" suggested that the ABPE might have different levels to the practice much as meditation does (see Appendix I). In her final interview, she speaks about being concerned with not doing it (the ABPE practice) right. She was concerned that she was not feeling what she was supposed to, not getting it (the understanding), as she perceived the teacher had. Although lack of trust in the self is a common fallacy of our human existence, "Ann" still recognized that there might be different levels at which we come to know the landscape.

At Bainbridge Island, I was concerned that I was not able to experience a heart connection like I had at the other research sites. There are many variables that could have caused this; some are known, and others are not. I did not practice the methodologies in the same sequence at the Bainbridge Island site as I had at the other sites. Nor did I use the

same mediums in the same sequence. Instead, I followed what my intuition told me to do. Also, I was in a teaching mode, which may have resulted in a different outcome. Another variable might be that I had prior relationships with Hominey Branch and the Santa Cruz River sites. Emotional intelligence, the heart intelligence, as "Ann" refers to it, may lead to a deeper level of knowing. The research site at Goose Pond was unique in that I wielded my body as the tool for art making, which opened me to a more direct connection with the place.

I recognize there are different levels of the ABPE process, with each level offering a different outcome, knowledge access, and achieved understanding. In this research study, it is not possible to know all of the variables or limitations. Another study would be necessary.

Unique to ABPE is that the learning is not necessarily immediate. The learning does not come all at once; instead, it seeps in over time. Knowledge construction is a layering process. Patterns of learning are laid down as tacit knowledge, and then released in the image making process. In the ABPE practice, the tacit knowing can come to the forefront of one's awareness slowly or all at once as "ah-ha" moments.

"Bill's" experience also makes me aware of the importance of the arts as a way to support multiple intelligence and learning styles. For some, bridging the gap through the language of words may be more effective. This could indicate the sequencing effect of ABPE may need to be versatile. Again, this finding suggests the need for further study.

The results of the study show that with more practical application of ABPE, the artist/researcher will have a different outcome than someone who does not invest a comparable amount of time. I became quite versed in the ABPE process over time, developing the methods and becoming more practiced with the mediums. I spent approximately 80% more time at the Bainbridge Island research site than the co-participants, which resulted in more data and therefore more opportunity for opening to the wisdom of the place. Time invested in the research and practice of methods is one variable to the outcome of differing levels of understanding achieved through the ABPE processes.

My background as an artist makes me familiar with both the language of art and art mediums. Variables that could influence the outcomes of the co-participants could include: background in arts and science, levels of ecological knowledge, multiple intelligences and learning styles, held belief systems, and an openness to the unknown. As I have mentioned before, I cannot assess the co-participants' understanding without their interpretation of the findings. This opportunity happened only once, when one of the co-participants was interviewed regarding her experience in the research. Further research is necessary to understand the reason for the varying success rates.

Openness To the Unknown

In the literature review, I have written about openness to other dimensions and to other worlds necessary to reach certain levels of understanding. I have referred to the other worlds as places of magic. Throughout the dissertation, I use many terms for the multiple

dimensions to which one might travel, which are neither spatial nor temporal. These terms cross discipline boundaries: multiple dimensions—spoken in the field of physics; supramundane worlds—spoken in the field of the arts and ethnology; multiple scales—spoken in the field of ecology; and the magical—spoken in the field of metaphysics. To find common ground through language has been a challenge.

Historically, one member of a tribe or community was the designated medicine person, shaman, or magician. This was not a position available to all members, some of the reasons being that every member of a community did not have the capacity to enter or return from these worlds. There was great sacrifice and responsibility that went with these positions. Shamans were held accountable for the health and well being of their community. The medicine people had to be open to a process that led them away from the traditional social and cultural constructs of their community. These individuals were the mediators who crossed the boundary between worlds and returned with the "truths" that framed their world paradigm.

In our modern Western culture, the scientist is most often given precedence for determining truth that frames the culture's world paradigm. This paradigm is reached through a linear and logical inquiry methodology that stems from an objective view.

Historically, the artist has "opened" to the otherworldly dimensions through ritual and art. Psychology has raised our awareness that access to the unconscious is through images, dreams, the imagination, and hypnosis. The image is an instrument to bring forth

the unconscious to a conscious level. The unconscious and the soul or spirit may be one and the same. This could mean that images come from the soul.[245]

Final Statement

The results of the research study show that the images created in the ABPE practice may be a recapitulation of the knowledge held within the landscape. The land's knowledge, the ontogeny and phylogeny of the living organisms reside in the artist/researcher and in the image. The living organism is a creation of patterns of energy, the static result of the multiplication and diffusion of living matter. Patterns of participation can be thought of as autopoiesis or the active engagement that transpires between humans and the animate world through the process of ABPE. The image articulates the reciprocal relationship between one's spirit and the spirit of place: a holistic paradigm, bringing together mind, body, and spirit.

The results of this research show ABPE offers another method for knowing the language of place through means other than a Western scientific methodology. The research study makes us aware that there are different natural predispositions of human cognition and that Art-Based Perceptual Ecology makes available another modality for expressing one's knowledge and understanding of the landscape.

245 McNiff, S. 1981

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APPENDIX A

Working Definition of Terms

Place, Landscape, Land

- Place is the environment in which we live. Landscape is a locality and defined by Allen and Hoekstra[246] as "the spatial matrix in which organisms, populations, ecosystems, and the like are set." Place is defined by Tallmadge as "...nothing more than a space with a story."[247]

Perception

- Perception is the larger process of making meaning out of sensation. Perception and sensation work in tandem—the raw information is meaningless if it is not referred to something inside the organism that gives it meaning and sensation only takes action when something is there to guide the activity.[248] In a more poetic sense, perception is a reciprocal participation, bodily engagement with the patterns and gestures of place — it is the active relationship between my own flesh and the encompassing flesh of the world, a silent conversation with the animate landscape that unfolds beneath my conscious realm.[249]

246 Allen, T. and T. Hoekstra 1992

247 Tallmadge, 1990, p. 25

248 Klinger, E. 1981

249 Merleau-Ponty, M. 1962

Phenomenology

- Phenomenology is the study of direct experience through the senses; it is our body in relationship to the world around us. Edmund Husserl in early 1900's articulated phenomenology as "the world as it is experienced in its felt immediacy."[250]

Ecological Perception

- In his ecological model of perception, James Gibson says the world and we are inseparable, we walk through this world; "with-the-eyes-in-the-head-on-the-body-resting-on-the-ground." It is in this realm that we recognize it is the body that is the location of the connection between self and the landscape.

Ecological Vernacular of Place

- Ecology is the science of the relationship between an organism and its environment. Vernacular is the native language of a locality. Ecological vernacular would be the native language that is spoken between and within species that reside in a particular locality.

Codes, Patterns

- Patterns in the landscape area a memory of structure, of form created in response to the environmental conditions that happened in the landscape. Landscape holds memory in the form of patterns.

250 Abram, D. 1996, p. 35

Animate Beings

- The word animate derives from a Latin word signifying soul or breath. Among its meanings in the dictionary are "to give spirit to" or "to energize."[251] Animate does not only refer to that which we know to be alive: animals, but all phenomenon as it calls us to participate through our senses, as it influences and engages us bodily.[252]

Sentient

- Sentient being suggests living organisms having sense perception, experiencing sensation or feeling. The sentient landscape refers to the land having the ability to perceive changes in their environment. As one example: bacteria "...sense chemical differences in their surroundings and, accordingly, swim toward sugar and away from acid; they sense and avoid heat, move away from light or toward it, some bacteria can even detect magnetic fields."[253] According to the Santiago theory the simplest organisms are capable of perception and thus cognition.[254]

Gesture

- Language is a means of communication. Since the advancement of language, the human species has relied heavily on a written and oral language, too often forgetting the language of the body. Merleau-Ponty points out, it is the body, which speaks, and this language is a part of the whole sensible world.[255] If

251 Webster's Dictionary

252 Abram, D. 1996

253 Margulis, L. and Sagan, D. 1995, p.179

254 Maturana, H. and Varela, F. 1980

255 Merleau-Ponty, M. 1962

language is always corporal and sensorially resonant, then it can never be separated out from the animate landscape in which we participate. Gestures, the expression of this bodily language are not only the language of the human body but all expressive bodies. "Our own speaking, then, does not set us out-side of the animate landscape but—whether or not we are aware of it—inscribes us more fully in its chattering, whispering, soundful depths. ...The invisible shapes of smells, rhythms of cricket song, and the movement of shadows...each terrain, each ecology seems to have its own particular intelligence, its unique vernacular of soil and leaf and sky."[256]

Gestalt

- The German word for organic form is gestalt. Around the turn of the century Christian von Ehrenfels was first to use the term gestalt in the sense of an irreducible perceptual pattern. Leading the way for systems thinking later, "Ehrenfels characterized gestalt as asserting the whole is more than the sum of its parts. "[257] Following in their footsteps were Gestalt psychologist Wertheimer and Kohler "who saw the existence of irreducible wholes as a key aspect of perception. Living organisms, they asserted, perceive things not in terms of isolated elements, but as integrated perceptual patterns—meaningful organized wholes, which exhibit qualities that are absent in their parts."[258]

256 Abram, D. 1996, p.80

257 Capra, F. 1996, p.31

258 Capra, F. 1996, p.32

Place-Based Knowledge

- This knowledge comes from our perception of local natural history through observation and experience, by being embedded in one's ecological and cultural community. It also comes from the stories passed on by elders and the animate beings of the landscape. By giving direct attention to, then recognizing the patterns and the particulars of what is before you the knowledge of the landscape comes into you, shapes you. This knowledge comes from a reciprocal relationship between human senses and the sensuous earth.[259]

Perceptual Ecology

- Perception and sensation work in tandem as the body interfaces with the environment. Thomashow tells us perceptual is to apprehend through the senses. In the phrase perceptual ecology, ecology commands the same strength as perceptual. The study of ecology gives you a way to think about what your senses apprehend. "The visceral impressions move you toward that interpretation, wanting to know more, thus both paths informing one another."[260]

Art-Based Perceptual Ecology (ABPE)[261]

- I propose a way of thinking about landscape and memory and art making that raises people's awareness of the biosphere. I propose a method in which people can experience the biosphere as it is constantly unfolding and refolding. When

259 Abram, D. 1996

260 Ibid.

261 Woolery, L.A. 1999

practicing this method (ABPE) the land is revealed in layers of complexity, at multiple scales. In the art making process, these layers arise to the surface in the image and present a tangible awareness, an unveiling as such, of the networks of relationships, embedded in larger networks, known as Earth's systems.

- Images are energy made visible.[262] Images created in ABPE are the visual manifestation of my sensory perception, the physical energy that is received by the specialized receptor cells within the human body. The image becomes a graphic record of my perception of this place. It is a recording of my own experiential data, the way in which I uniquely perceived, thought, and felt, this experience with the natural world.[263]

Image, Imagery, Imagination, Imaginable, and Imaginary

- The image in all of its forms is a part of the human organism's psychological interface with the surrounding environment[264] Images are a universal phenomena, experienced in our dreams, imagination, memory, and stories. You will see all terms used interchangeably through out the dissertation.

262 Allen, P. 1994

263 Rhyne, J. 1984

264 Klinger, E. 1981

Making Art or Art Making

- Many times throughout this work I interchange the words art, making art, and image making. In this writing, I speak of art as a way of knowing[265] and as a language with its own unique vocabulary.[266] I consider art, not as a single object but as a realm of human activity and experience in relation to other such realms.[267] In the instances that I do use the word art, I am referring to all disciplines of the creative arts, visual, dance/movement, music, literary, theater, etc. However, I try to refrain from using the word art as much as possible as there are societal values inherent in the word. In modern western culture, art has been relinquished to only being made by artists, which often resides in a museum or gallery: separating the viewer from the physicality involved in the creation of the work. Art being used in this way connotes an end product or an object.

  The way in which I use the word art in these writings is with an emphasis on the process as opposed to the product. Art making is the process of giving images form.[268] The image is the vocabulary. In the dissertation I will describe the process of giving images form as the transference of kinesthetic energy. Allen speaks specifically of drawing as energy made visible. Drawing is a way of knowing the essence of things...a way in which to form a relationship to the

265 Allen, P. 1995

266 Dewey, J. 1980

267 Dissanayake, E. 1988

268 Allen, P. 1995 and S. McNiff, 1992

energy of the subject.[269] In my theory I push this idea further; I see the process brought about through a participatory relationship or energy exchange between the landscape and myself. Thus the image developed in the (painting) is a record or map of this energy exchange.

Metaphor

- Understanding metaphor is integral to understanding ABPEP. Metaphor occurs in image making and in all of the arts including writing. Each image is a symbol of ones cognition, or knowledge constructed in the mind, body, and soul. In this way, our art becomes a way a language by which we can identify what we can't explain with words. The art as metaphor becomes a representation of something else.

Sense of Place

- If place is the environment in which we live, then sense of place is having an understanding of where you live, being embedded in and participating in that place. People are typically interested in their immediate community in which they participate, both ecological and cultural and it is presumed by environmental educators that achieving a reflective sense of place will contribute to an ethic of caring about these communities in which they are immersed.[270]

269 Allen, P. 1995

270 Thomashow, M. 2002

APPENDIX B

Questions Co-participants Were Asked to Consider When First Practicing ABPE

10.15.05

1. What happened to you and within you during your experience in the landscape when practicing ABPE?
2. How do you interpret your images, your words?
3. Did the image reveal patterns in the landscape?
4. Were the patterns discovered in the images meaningful to gaining a deeper understanding of the place?
5. Did the image created in the ABPE practices reveal the land's stories and lead you to clues of the evolutionary history of the land?
6. Did the dialoguing process reveal the land's stories? How were the outcomes of image making, dialoguing with the images or dialoguing with the landscape, same/different?
7. Some of the written language you have used is metaphorical, the images are symbolic: how do these help you to understand the landscape?
8. Intuition is one means you have acknowledged in your understanding of this landscape. How do you know whether the conclusions you are drawing about ecology are right or wrong based on what you intuit?

9. Is there a need to have a formal education in science or ecology to understand the knowledge presented in the art making process?
10. Was there a need to have any previous experience or education in order to understand the knowledge presented in the art making process?
11. Would your experience practicing ABPE be meaningful if you had no knowledge of the names of plants or a science background?
12. Is there a need to have an open mind in order to understand the knowledge presented in the art making process?
13. Did the practice of art-based perceptual ecology lead you to know the language of place?

APPENDIX C

Instructions for Practicing Dialoguing With Images and the Landscape

- This is not a linear process. Instead, move back and forth between image making, dialoguing with images, dialoguing with the land, reflecting on image and writing.

- Spend the majority of the time today in the dialoguing process. The image making process is just a way for you to get back into being full-bodied in the landscape.

- Be open to the process. Put your own critic away. Clear your head.

- Begin with the question, "what can you tell me today?" Ask this question of the image and/or the land. Note in your writing who is it you are asking the question.

- Be open to really hear what first comes in to your head. Also be aware and notice what you are feeling in your body. Does your intuition, your gut say something to you? Write it down. Go with the flow of consciousness. Try your best not to edit or critique!

- Notice what is being said and continue to ask questions as if you were having a conversation with a friend.

- If you get stuck, approach the process by being aware of your images. Notice the lines, shapes, and texture; consider what that might mean? Notice the color, the spatial arrangement. Consider the quality of light.

- Notice what you are not noticing. Ask the question why.

APPENDIX D

Lee Ann's Narrative At the Research Site on Bainbridge Island

12.23.04

In front of me are the co-participants images of the Bainbridge Island research site: fourteen students and mine. The directions for the first drawing were to draw a sketch of what you see in your visual field, before you. Use pencil or black marker as the medium.

As I look at these images now, I consider mounting them on a wheel: this would give me a 360-degree view, giving me a perspective of what the co-participants saw.

In an art language, how would I describe it? From a pattern language how would I describe it?

What are the multiple scales and can I see them in others work as well as my own? Is the collection of images a cross cut of the forest system and in what way? Are there clues in the images that lead me to the evolutionary history of the place?

I begin by looking at the B/W images first.

Lee Ann -- Tell me, what do I see?

Image -- Straight uprights, parallel to one another, others cast at an angle, diagonal, and a middle story devoid of branching. The understory is thick, intimidating, creating an

impasse, but not impossible to maneuver through. The eye travels horizontally with little effort, finding places to duck and dodge, stumps left as legacies litter the landscape in a pattern of scarcity. Textures of ground cover present a visual chaos like the view inside a Mexican candy store, a feast for the eyes, busy, busy, busy.

Lee Ann -- The mirror in the middle: the pool of water reflects all, is clear. Sweeping curves, elegant and graceful like the expressing limbs of the ballet dancer cutting across visual planes coming out of this corner and that at this level and that.

A whirly wig spins its way earthward as light bathes the right side of the alder with blonde hues of summer.

A young child once asked me, is it true moss only grows on the north side of trees? I look now, if north is moss then wintering blonde beauties bathe wrapped in multi-layers of fur at the source of this timid light.

Movement here and there captures my attention, a flutter of a leaf talking to another. Light flickers reflected from chlorophyllic consumers on the pool in front of me mirroring a community of common species, different shapes, same origin.

I reach out to the gray pithy structure in front of me, it is weary and brittle beneath my hand. The land creates such a paradox of wet and dry, life and death.

In this circular depressed vessel, three-leaved vines spread tendrils round my feet leaving me dizzy with delight as they draw me spiraling down into the center of the swirling vortex of the earth below.

Lee Ann -- What is the temporal element of the landscape?

Next I turn to the color images laid out in front of me. I consider what has been worked out in the more detailed B&W images in comparison to the first color? The medium has changed to watercolor and colored pencil. It is hard to know if the materials limited the color palate or more likely defined it; just like words in the cultures language. But I do see attempts by the co-participants and myself to go off the chart and explore a new color vocabulary.

In the ABPE abstraction series I begin to see less detail as the co-participants deconstruct their view of the subject, unveiling levels from their view of the landscape. A focus on dark and light evolves, pushing the boundaries of what is known of landscapes, defining foreground, and background. Fractals begin to reveal themselves as well as patterns, containments of niches, and microsystems.

APPENDIX E

Lee Ann Dialoguing With the Landscape and the Questions That Arise From That Dialogue at the Bainbridge Island Research Site

12.23.04

Lee Ann -- What is the abstraction of the place – how do I wrap my mind, my body around it? Do I even have a grasp of understanding of what this place is yet? Patterns are what I am seeing today – patterns of the different growth structures of the organisms. How are the patterns overlapping? How are these overlaid with the mechanisms of the site? There is a nucleus like a cell in this drawing. I was wondering why I saw green representing the life and it moved out to brown – the decomposers, but then it comes back under the composition.

What is the paradox of this spot? Height over shapes: angles vs. round and organic. At this elevated level, the water is still and reflective in comparison to moving, flowing water, which I can hear below. Is the elevated water from a different source? As I move down the hillside and water is moving (flowing) again.

5.23.05

I am sitting at the edge of the glen, ready to start my process. I find myself very tightly tucked within a thick patch of salal looking out over the glen the very open space of the water being what attracts me. This openness allows a quality of light necessary for my comfort. The sun is popping in and out—glorious sunshine. To my right my eyes focus tightly and I see a banana slug an inch long, a tiny crepuscular creature—an ant crawls across my knee. What are most prominent in my sensory experience are the voluptuous whirrs—stirring of the wind in the trees. It's sound suggests different levels and different velocities. Trees are swaying profoundly, stems dropping to my right. I notice the delicate faded jade green blossom of the salal dipped at the edge in pink, like little bells hung on an arch cutting delicately through space. And the birds, how could I forget the birds, clear sound floating in an ethereal space, multiple levels of tone.

I am here to dialogue with the landscape and with the images I have previously made at this research site in order to more fully understand the ecology of this place.

Lee Ann -- What can you tell me today? I look at the image of 3 elliptical surfaces raised above the ground. What are you telling me?

Landscape -- The shape, consider the shape and the repetition. Repeat it again.

Lee Ann -- I draw it once on the page and then again. I think about perspective. I am considering the perspective a little higher than eye level as to where I focus, but what if I look down, look up, and look through.

Landscape -- What else do you see in your other drawings, that has such a shape?

Lee Ann -- What I notice is the patterning of the spatial design of the placement of the alders: the rings of the trees growth. What if all growth movement was about this elliptical design? Is the growth of a cell known? Do I know it? Does it mimic this elliptical image I have drawn?

Lee Ann -- What can I know about the air that is caressing my face, the change of temperature I feel on my skin? Is the elliptical shape, the patterns I am observing having some relationship to the biosphere?

I watch the air move the water in front of me creating patterns on its surface, it is a living mosaic – a reflection of the plants with the winds change of surface and now the rain drops change the surface patterns, how does this fit into the concept of the elliptical shape of nature?

What is the sound pattern of the rain falling? Is it represented in some way in repeated in the elliptical shape?

I think of Ann, she is much more precise, has a few more edges in her images, what shapes might she see as she looks out at you?

Landscape -- The patterns are a part of our make-up. Think back about what you have learned, you view things at a scale that is familiar, that you can understand.

Lee Ann -- But what about viewing the landscape at multiple scales, do I work with what is familiar first and learn from that and that is what opens me to a scale that is unfamiliar? Do I possess the mechanism that supports knowing at multiple scales?

Landscape -- your ancestors did, perhaps they weren't the best at that, but they have to have had this mechanism in order to survive. You hold that within you.

Lee Ann -- Just now I hold my black fleece over my head creating a protection for my papers from the rain. In that dark space the words come freely, providing openness to the conversation. But when I lift the jacket the light comes in and I feel a sense of restriction. My conversation closes down. I try again.

Lee Ann -- What can you tell me today?

Landscape -- Being north and cold vs. south and hot, light varies in these places.

Lee Ann -- What can your light teach me?

Landscape -- It isn't just the light; it is also the water and the light, the water and the nutrients. Light is one variable. In the variable the light is determining my growth, rate of growth, quality of growth. If the quality is poor, photosynthesis is not taking place. Combinations of those change the look of the site, the visible patterns available to you with your unaided eye.

Lee Ann -- So does that mean I have an instant "take", understanding of the combinations of equation of the soil, light, water, air, just by focusing on the scale of light?

Landscape -- yes, you scanned it and knew.

Lee Ann -- Why do I come back to this site? Why was I drawn to it in the beginning? Why should I care about these variables?

Landscape -- Again this goes back to species origin. If you paid attention to these elements they were key to survival. Think back about Dissanayake's concept of making special was part of species origin. But what part did that play in language? Did it? How is the art work tied in to the making special? Is art the translation?

Landscape -- go back and look at what you know about art about making special. Creativity, creation, the stories this organism is telling is the growth or creativity, creation, autopoiesis, the production of life. Life living. The artist is the conduit (conductor) for autopoiesis in the art making process.

Lee Ann -- Is this how humans truly fit into the concept of LAWS (light, air, water, soil) rather than as a cultural entity?

APPENDIX F

The Narratives and Dialogues of Eight of the Co-participants' At the Bainbridge Island Research Site

12.04.04

The directions given to the co-participants at the research site were to begin with the ABPE abstraction exercise. In their image making I ask them to respond to their experience in the landscape through the language of art: shapes, lines, form, and texture. They were also asked to respond in writing to their immediate impressions of their sensory experience at the site. They had the choice of beginning with the writing or the image making. Only eight of the 14 co-participants' works were available for data in the research study.

The image making is not about getting it right. It is about your sensorial observations as you experience the place. Consider these questions as you create the images; how does the image making open the artist to a new meaning and understanding of the landscape; how does it provide a means for speculation; or open worn out ideas and frame new questions?

"Ann" -- Morning sunlight filtering in

A fortress, safe, tucked away looking out not looking in

Canopy of sword ferns

Smells of cedar leaves—whiffs of sweet cedar find my nose

Orange carpet

Airplanes above, not jets but propeller style

Mossy logs lying still, cemented to the ground but soft as a mattress, a mattress filled with life

Light greens, dark greens, and dead greens—yellow and brown

Tangle of cedar branches growing from a massive clump of small round cedars—which will win in the race for growth?

Lots of babies begin to appear—wood fern, hemlock, red huckleberry

Twinkle of wetness, resting on the life of the forest

It is a transitional place, half cedars, half alders, open and closed, light and dark

Nooks and crannies, rooms of a house—a miniature world to be discovered

I glanced over this way when we were walking in. I instantly recognized it as a place I would choose to play as a child. It is very similar to the different places I would play as a child. When I sat down on the bed of dried cedar leaves, I could feel them and their scratchy texture against my bare skin (especially down my backside) with out ever touching them.

"Bill" -- Dangling in a radiating rhetoric

Moisture manipulating the energy of a star

Embraced by a creature of its creation

Enticing me from afar

I sought out the stump

But you caught my eye

Inspiring investigation

As to how come and why

Gravity gropes your form

The ground waits in anticipation

Yet the lucky lichen holds on

Keeping you firmly in your situation

The gentle breeze brings

Forth a more playful side

On top of it's gusts and gales

You do ride

Bridged by a spiders web

Discovering the branches empty space

The filaments all flicker

Pointing to you in your place

"Carl" -- The sun's reflection off the pond is surreal. I can't tell if I'm looking through the water at the browns and greens or whether my angle of refraction is the only color schematic visible. I feel decay. The standing water feels like an acid hole sucking nutrients from the surrounding ecosystem. I do not see variation in the decay of the Alder and Maple leaves. I see light weaving in and out of the ends of the organic matter, but pigment has shriveled away. The rectangular structure of the plant cells is reflecting a muddy brown, soon to be broken and dispersed possibly into the acidic hole.

"Frank" -- I am resting in the shade, but am gazing out upon sunshine in an alder grove, my back is to an old tree stump and there are curious humps in the surrounding area. The alders, the humps in the landscape, the stump behind me, and the open sky all tell me what I already know. This area has been cleared of its once majestic old growth trees and is in a process of recovery. Even the relative

silence of birds lends an air of solemnity that evokes the seriousness of a graveyard. Not sadness for what has been lost but respect for what was a nostalgia for an unknown time (to me).

Trees are so incredibly patient, growing so subtly that they seem to have always been the way they are now! The undergrowth of shrubs and ferns and nettle seems to rush forward in time, hurrying to fill the open spaces of light where once there was great shadow. I feel as though I am in a place of healing. Even the ground below me seems jagged and altered as though torn apart at one time. It has not yet settled into the soft and rolling smoothness of undisturbed like the soft swells of a freshly snow covered field, before human movement alters it in such a way that the rest of the winters snow fall can still barely hide the jagged remains of human activity. Leaves and needles fall gently after a small gust and the soft taping on branches and needles tells the path of falling. It is quite here, but not silent.

"Grant" -- The warm sunshine peers out from behind a cloud, warming my neck. The gentle breeze blows the fresh air as leaves rustle in the wind. I can see my breath escape my mouth and wonder to which of my friends around me I owe gratitude. This cedar, moss; thank you all. A Douglas squirrel fires off an alarm call overhead, more out of enjoyment than necessity I'm sure. The air again

moving causes ripples to appear on the water. Changing what is perceived in the reflection, I know now that blue skies are overhead without even looking up from my stare. Many alders eager to grow in the meadow are being supervised by the western red cedar. A mighty big leaf maple stands bravely in the flood plain. A symphony of triumph engulfs this area: chickadees, nuthatches, stellar jay all involved in singing the beautiful song on a beautiful day. Ah-ha the tree frog joins in a duet with a chickadee—they do hear each other's song! The rumble in the background of water escaping, rustling and rushing down the ravine headed towards its ultimate destiny, recapitulation. The ground is laden with water: your foot sinks in with every step. The sword fern seem to have a better hold than I, steadfast attachment and grounded they sway gently in the breeze—acknowledging the wind and sun. So too does the small batch of cattail enjoying this oasis.

"Hannah" -- I chose this spot because of the contrasts within the landscape it affords me. Slightly elevated, upon a decaying log. The sun's rays lick, ever so gently, the edges of the ferns and salal that blanket the area. The bright green of the plants stand out against the darkness of the soil and decaying leaves. The water that pools at the base of the sight is still. The wind comes periodically nudging the plants from their stationary positions, causing the water to reflect their movement. The decay surrounding the area, like that that grew before it feeds the life that now

exists. A branch from the fallen log on which I sit has moss covering much of its body. Decomposition along the branch is visible, with sighs that many a creature has visited for sustenance. The ferns are plentiful, reaching out as if to feel what lies above them. The alders and pine trees shelter the center of the site from above. The sound of water running can be heard in the distance. The crispness in the air chills my nose and fingertips. I can smell the damp earth. It is the smell of the soil absorbing the nutrients from the various leaves and branches mother earth has gathered on nature's floor. The birds sing occasionally reminding me they are here that they too have a place in nature. Automobile and plane sounds threaten to obscure the sounds created by this place. The cold now moves through my fingers into my hand, through my toes into my feet. It impedes my focus and my ability to sense the depth around me is disappearing.

"Iris" -- Why did I choose the place? Nest, cozy, soft needles, transition between openness and forest splurges of light, screen to nature, sunlight on face, no one in front, red cedar tree, slight incline, overhead cover, sword ferns
Fading sun, resurgence, shadows, glowing, glistening, sword fern light palette, shades and swaying, depth. Permeating membranes, saturating skulls, warming souls, delicious brisk flavor, vices creeping, marked messages, partly infused,

partly shadowed, surfing to each side, shuttering from cold, gelling from the warmth.

Foamy crunch, mergady (sic) moo, nesteriffic (sic), Venetian blinds, suicide spinner, ballerina, throne, luxurious, reclining headboard, encroaching, covering, moat—raging, rushing, pipe, crushing.

Spotlight—right eye, pores shining, eyeball blurring.

Gatekeeper propped up at the post, observing, and weapon of choice.

Drawbridge—machinist long, rolling up.

Rose petals—carpeting, maroon, orange, burnt dried, layered.

Entertainment—musical chirps, reverberating, crisp, conversational

curtains—partially open, twittling (sic), dancing, frayed at the edges.

"Joan" -- The battle arena (sport or war)

Cedar vs. marsh grass

Referee: sword fern watching intently at the line (will his position change with or in the ecosystem depending on the outcome?) (sic)

Witness: elderly alder, vine maples, strong group of cedar supporters on one side

Children: grove of skinny alders, huddling together, watching but nervous

Is this spirited good fun we are all watching or a bloody battle? (or all out war?)

We are fighting, always fighting for space, authority, sheer numbers, families, neighbors, schools, stakes, and countries.

Isn't nature supposed to be the peaceful place?

But how they are, the plants fighting (sic)!

Maybe if I look at it differently? Is the tree sheltering the marsh grass? If so, is she acting selfishly in someway, meaning she is simply battling something else.

From a distance beautiful, but up close always fighting for each parts very survival.

APPENDIX G

Ann's Narrative and Dialogue With the Landscape At the Bainbridge Island Research Site

5.22.05

Luscious green brilliant color. The array of greens is amazing. My protected spot is still dark but the window out is bright and fresh. The sun is shining like it was on that cold December day but it is different. The whites and grays of the Alder back are no longer in the light like the center of the stage. The light captures the green leaves: (sic) the Alder trunks are the columns holding up the "actors."

What I notice about this place – my eyes go right t back to the log, the horizontal snag in the vertical forest. It is greener with moss compared to 5 months ago but the form is still strong. I also see a branch on a cedar. I studied this branch before and its shape is still intriguing to me. I see ribs from a spine; the gentle swoop holds the aura of the strong cedar. Yes! It is like the words the cedar cannot speak are pronounced by the shape of its boughs and delicate leaves.

The wind gusts! It tells me that I am small and it is powerful. I know I chose this place because I am protected. The alders around are young compared to the cedars. They are tall and brittle; they don't know how the wind can be dangerous to them and me. When their branches fall they can harm.

My big cedar barely moves in the wind. Under it, I am safe from falling branches. It is big and wise and stands tall, protecting the understory of young salal and fern and me.

Ann Dialoguing With Place – to the horizontal snag in the forest

"Ann" -- What can you tell me today?

Landscape -- I stay unchanged while across the pond the alders change daily – growing leaves, loosing branches, moving, swaying, and growing lichen. I stay in my place, cemented to the log, one day I will move but it will be only to fall down. Once the friends inside me do their work, I will fall down to the ground into another phase of my life.

As I stay in my place I enjoy the protection I have from the elements. The cedars and one hemlock protect me. I am inviting to the green mosses that live upon my wood. I have a use to them but I am just waiting to fall.

"Ann" -- What do you see from your place?

Landscape -- I see change. I see bright greens fill this place. I see the sun come and go. I see the branches from the hemlock above me stay their brown color. I see the understory grow lush and full. I see change everyday but not with myself.

"Ann" -- is this like me not feeling like I am changing while I see everyone else around me change? Really I am changing and growing but it is so slow and normal that I don't notice it.

Dialoguing With Place: the new salal leaf in front of me

"Ann" -- What can you tell me today?

Landscape -- It is glorious to be here. I want to stay forever. I am surrounded by friends who are doing the same thing I am but we are also racing to be the tallest and best. Some are doing better, they are taller, some are more separated from the group, and they are smaller. We are young and fresh and tender. We don't know what cold winters are like. We are nervous to find out what will come in the future months.

Dialoguing with cedar branches and new ferns and salal

Landscape -- Every year I am left (cedar) alone through the winter. Every spring I am joined by new neighbors who come for the spring and summer. Some of these friends survive with me through the winter most die and fall. I am a constant. I will welcome new friends and will be sad to see them go. I am okay alone. I am fuller with friends.

"Ann" -- I get goose bumps when the rain begins to fall; a chill runs through my body. The sky gets dark and I want to be inside warm and snug. Everything smells fresh and

clean which I like but I want to be in a house by a fire away from the dark rainy outside. I love it but I want to be protected from it. I am not cold but I still get the shivers. It's an instinct I think.

The rain and wind, I can't tell the sounds apart. They whoosh; I see the droplets fall on the leaves of plants. The sound takes me back to my childhood. I hear it and I want to go in but sometimes I can't because I am too far away from my home. I love my cedar overhead. The rain pours but only a few drops fall on me. I am protected. The shivers don't go away. I continually feel them in my body. There is something very instinctual in me. I want to find shelter. I want to be in a place where I am away.

APPENDIX H

Final Interview With "Ann"

10.15.05

Lee Ann -- How would you describe what the experience was for you in making art at this site? Think about them as separate experiences, the first time and the second time.

"Ann" -- The first time there was a lot of looking away and noticing what things were around me and why I chose that spot. I think the first time that was what I was most interested in. And I know a lot of it had to do with the childhood thing of finding a childhood place to stash away and hide to see things from. And the second time I chose to go back to that place just because I had liked it so much the first time. But the second time I started to look at the change that had happened over the five months from the first time we visited to the second time.

The second time we visited, because it was spring, so much of the new growth, I think that was what I was drawn to and it was the colors. In reading the writing that I did it seems like I, the things that are constant, the things that are there all year long, like the hemlocks and the cedars and the new growth, the alder and the salal that were there, the conversations that I was having with them, I know that sounds weird, but that was what it is, was about these things that are always there versus things that come in and leave, kind

of like the feeling it gives the place. So there is this change that is happening, seeing the old versus the new. That is kind of what I got out of reading what I wrote.

"Ann" -- Just thinking about the two different experiences, the first time really feeling kind of taking the whole place in and the second time noticing things. Two different parts to it, the first part, the spot was a little spot, so the first time I went I was very much interested in what was up close in that spot and the second time looking out beyond and seeing all the alders that were growing up all around this little pond. I felt like I was looking out the window of this hole I had established the first time and that I had was looking beyond the second time.

Lee Ann -- Can you talk about how when you look at your images now, how do they speak to what you just said, the difference between the first time and the second time and what you were observing and noticing the first time, how do the images speak to that?

"Ann" -- Looking at this one without even knowing it was my spring one, (points to Figure 20) the color in it is a lot more vibrant and I know that the picture is looking beyond and that is exactly what that is. This is my second visit. Where this picture here, (points to Figures 16) this one really captures my first experience because it's about what is all up close to me and this is what I really focused on. This is the up close; this is all of the hemlocks that were right here to my left hand side and all of these ferns. All of these

images have to do with the ferns (points to Figures 15, 16, 17). The protecting barrier between the inside versus the outside.

Lee Ann -- How did the art making help you to do the focus?

"Ann" -- If I hadn't been making art, I don't think I would have noticed a lot of the things around me I would have looked at the whole big thing rather than looking at the smaller pieces. And like looking at the different characteristics of each of the ferns in front of me and how little branches come off of the snag, the little snag that I was focused on. If I hadn't been making art I don't think that I would have looked so closely at the space around me.

Lee Ann -- One of the ten steps I have written, in order to make art I must slow my pace and silent myself. Could you speak about this?

"Ann" -- In both of the experiences I know that when I first got there I sat there probably for ten or fifteen minutes, not doing anything, just taking it in and experiencing it with all of my senses. I felt that was a very important piece of it where I was listening and I was smelling and feeling. And then writing about the feelings that I was having I am able to go back to that really easily when I read the writing because I know that when the rain came

and the wind came and it gave me Goosebumps I can feel those Goosebumps again, just from reading it.

Lee Ann -- And that comes to you more in the written language?

"Ann" -- Yeah.

Lee Ann -- Does it happen in the visual language?

"Ann" -- No I don't think it does. I can tell from the colors that I use that it was a darker time of year at the first visit. And here at the second I can tell that it was a much lighter time of year. And I know the sun was shining that day. But in order for me to express the sensorial experience I was having I feel I need to use words.

Lee Ann -- One of the things I want to note, in your images the first time you visited the site you were using watercolor pencil, watercolors, graphite pencil and a black sharpie and the second time you visited the site you were using color oil pastels. Did the medium have any effect on your experience?

Lee Ann -- To what degree does the medium you are using and your skill level with the medium reflect on what you are noticing in the images?

"Ann" -- The first time I had never used watercolor pencil and I feel like a lot of the time we were out there I was experimenting with watercolor pencil. That was a lot of experimenting. Second time we went and I used the craypa I knew how to use that and so I felt there was not as much focus on experimenting and trying new things. And I think that is why I made less art that time because I didn't really have the need to. First time with the watercolor pencils I felt like I all of a sudden learned this new trick and I was making art in this new way and I was so excited about it that I just wanted to make more and more of it. I think it might have been better if I would have used the same medium both times. I think comparing them would have made it a little bit easier. Because what colors would I have chosen in the springtime that I had used in the fall if I were using the same medium/palette?

Lee Ann -- Patterns with our unaided eye, patterns at different scales.
You are talking about pattern, but you are using a different language, you talk about gestures, the limb, the way it swoops is actually referring to its pattern of growth.

"Ann" -- patterns I notice, the way the cedar limb swoops, the shape of the ferns, then the snag, it has all of those little sharp places that used to be the branches. I don't know how they changed my image making. I feel that in some way I was drawn to them. When you look at the images, those patterns show up in most of all of my images.

Lee Ann – When experiencing the patterns, did it give you a deeper understanding of this landscape?

"Ann" -- With the cedar tree I think it did. The patterns in the branches are what I was telling about earlier, telling me something about it. The cedar tree with those branches and their swoopiness, somehow that told me more about the tree. I just don't know what it is.

Lee Ann -- At this moment do you have a feeling or a sense within you about the cedar tree that is not being articulated through words or are there no words there?

"Ann" -- No there are words there I just don't know how to get it across. There's something almost, you know people that do interpretive dances, I don't know if I need to do an interpretive dance but I feel like there is in a way this moving, how moving my arms almost gets it across better than words can get it.

Lee Ann -- And what does that tell you, what is the understanding of it when you translate it through your body, through a dance?

"Ann" -- That cedar tree and the way that it (I don't know I feel like I wrote about it) I remember looking at that and thinking that…the limbs of this tree are like the back bone and the individual branches coming off are like the ribs and it has multiples of them, many,

many backbones. Something about the way it stands with its grace and it's strength that comes across in the patterns of its branches.

Lee Ann -- How do we distinguish the metaphor from the literal?

"Ann" -- Well isn't that the case of all art. If you go in and look at it you can totally misinterpret someone's art. As long as it is making some sort of meaning for the person that is looking at it isn't that the point. Like do you always have to take what that person is trying to get across? I don't think so.

Lee Ann -- To remind you, these pieces are for you, no one else can interpret your images. So is that what art is about? I heard you just say, "... art is about, it's about you the artist finding meaning in their work." So (does that mean) the image is metaphorical and if you get meaning out of the metaphor, (you have an understanding of the place?).

"Ann" -- That metaphor helps me to understand the tree better. Looking at its shape in a new way. Like with my scientific mind I know, I don't even know if it is my scientific mind. Like when I was teaching kids about cedar trees that was something I drew their attention to because it was something that I had noticed. So I don't know if it is from my noticing it or from scientific knowledge, it's where it all gets mushy, kind of gray area. I don't know where it comes from. Making that metaphor about those branches helps me to

look at the tree in a different way because it appeared different after I looked at it that way. Again it is one of those things that I just don't have the words to explain it. It helped me.

Lee Ann -- So when you go back to teach or you go back in and look at these particular kind of trees, again are you able to go to that (inner) place of where your writing took you, or is there someplace in you that either the words "limbs like a backbone, branches like the ribs" or the image itself comes to mind? Is there either of those things happening? Do the process and the metaphor you came to help you to remember better? Maybe it is like a point of access into your memory or understanding it more?

"Ann" -- I think that and I was thinking about the experience of making this in the winter and then being on that site for another six months that helped me kind of identify the gestalt of the tree. I feel like one time we were walking through the woods together and it was night time and I was able to say I can tell that that is such and such a tree, even though it is dark and I can't see the branches and I can't see the foliage, but I can only see the shape, those sorts of things helped me clue into more about the tree later.
Clue into more about the tree later. Later I was better able to identify the tree, better just because of what I noticed when I was more focused on it.

"Ann" -- ...with what you are seeing and then I feel you can have even more of a dialogue which is kind of like the place I felt like you were hoping we would get to and I didn't

know if I got there. The whole time I was feeling I don't really know if I understand what she is saying. Because I was questioning it in myself, I don't know if I was supposed to be getting somewhere that I wasn't getting to.

Lee Ann -- Is it unique to you? Can others get to it? I don't know if anyone else can get there. Scientific education vs. intuitive knowledge, vs. traditional knowledge and emotional intelligence. It is hard for me to separate out what those elements of myself are and what those influences are and what my book knowledge is vs. my traditional knowledge because I grew up in a landscape like you and I loved it and I was out there all the time as a kid. And that is how this whole piece started anyway, was to go back to those memories. I asked myself, could I relieve them in my body?

The art making helped me to understand that place and then I got off on the ecology part of it because I think all people could use this practice to help open them to asking good questions and to noticing more and to noticing things in a different way then if they only experienced the place through scientific studies. Does ABPE take you to some other dimension? It has me, but I don't know if it can with others. I think it does way more than that. I think if in the right hands it could help us to understand how as a human species we construct knowledge.

Lee Ann -- What if when you read this code about the landscape, the cedars "J" where you speak about; limbs and branches; what if that is not at all what the code is? What if instead

you took it literally and thought they were ribs and backbones? Would it be ok to make that assumption?

"Ann" -- Maybe that is where scientific knowledge comes in. Someone is going to come along and tell me.

Lee Ann -- But who is to say what is right?

Lee Ann -- This is how kids learn, through a fantastical kind of experiencing. At what point does this process, the use of metaphor hinder or help the learning?

"Ann" -- I have the knowledge to know what my ribs and my back bone are, so there is no way that I would be able to say that is what is on that tree because I know I am not that tree. The metaphor is based on what I already, off of myself so I know they can't be translated into.

Lee Ann -- How do I know something, I know it as well as I know my own body. I can feel my body and I know it and I see it and I touch it and part of the brains function is we do same—different analysis with everything. So is it the same or different from my body: because I know my body and that subject in comparison to me. We do same/difference

comparison all of the time, so it is the same as my body because I know my body and that subject is in compression to my body therefore I know it.

"Ann" -- If I was basing that metaphor on something I didn't know anything about, then I think it would be a different situation.

Lee Ann -- But something you said earlier really sticks with me, you said as the artist making the art or writing the metaphor that it provided meaning for you. So meaning vs. absolute knowledge, is that different?

"Ann" -- If I had created a meaning using words I did not know, then that metaphor would have had no meaning to me. I had to base that metaphor on something I knew to begin with. I know what my backbone does and I know what my ribs do, therefore I am able to get meaning out of that metaphor.

Lee Ann -- One of the co-participants was describing intelligence in a drop of water and someplace I also talk about the lands nervous system. The question is presented; do I mean these literally or metaphorically? (do I need) more than rational process to know the land's stories?

"Ann" -- Scientific knowledge means logical means of knowing.

"Ann" -- You have to be open to the translation of the dialogue in order to accept it as a means of knowledge.

Lee Ann -- What is your thinking regarding this claim, that this (process of art making) gets you more than that logical means of understanding? Not a comparison, if you do this process you are going to have more of an understanding of western science, but what you are going to have specifically is understand the patterns, be able to read the clues in the landscape and come to some new understanding of the evolutionary history?

"Ann" -- You are listening to more than one side of the story, there are two sides of the story. In a lot of Western scientific understanding you are look in at only one side you are not actually asking the landscape it's opinion. And this is an opportunity to take both sides of the knowledge; I am able to take both sides of the point.

Lee Ann -- You have had the opportunity (through ABPE) to look at both sides and you have a formal scientific education prior to doing this, where did it take you to hear both sides versus if you had only known it from one side?

"Ann" -- So what did it do for me to know both sides? I feel like I am able to connect to it at a different level. Maybe it is one of those level things.

Lee Ann -- Can you say something about those level things?

"Ann" -- You can look at the surface appearance, but then you can look at the next level deeper into it what are…like the surface knowledge would be what you take in from books and translated on the landscape. But looking at it from the next level down, a deeper level would be, what can the landscape tell me and then the next one down would be listening to what the trees are actually telling you. Maybe it is like a question answer sort of thing. Where if you are willing to ask what can this landscape tell me, you are able to go to the next level and say, all right now I am actually going to listen to the tree. And once you listen to this tree, more questions may come up and then you are able to move to another level where you can take even more from that landscape.

Lee Ann -- And just to make sure I am clear on what you are saying, in this process of being able to ask more questions, earlier you had talked about how heart making itself and the dialoguing, but particularly in the art making, the questions came to you, you were having dialogue with the place while you were making art about it. Is that right?

"Ann" -- Yes.

Lee "Ann" -- So when you say the questions come and you answer it and you go to another level you are talking about in that art making the question would come and you would move to another level, what ever the next level would be?

"Ann" -- Yes.

Lee Ann -- So the synthesis of that is you are saying you would go to a deeper level by doing this pluralistic methodology, science, image making, and writing rather than if you were doing only science?

"Ann" -- Yes.

Lee Ann -- One other clarity I am trying to figure. In some of your writing you talk about and particularly when you were doing the dialoguing with place, you were talking about the trees having feelings and those sort of things. If you could clarify what that means to you, and again in the translation of words, we talk about humans having feelings, how is that the same or different from the trees having feelings?

"Ann" -- Trees having feelings, I guess that is a very western approach, because I am taking what I know and what I think of as feelings and putting them on that tree. In writing that, wondering even where these words come from, it is the feeling I am trying to put down on the paper is, feelings I am writing about from that tree, what ever that intuitive knowledge is that intuitive feeling I have in that place, that is what is coming to me and that is what is coming out on the paper.

(This might be an) anthropocentric view of things. I don't know what is lost and what is gained through that. But the trees have feelings and even though I don't think, through my writing I am able to get those feelings out, really describe the tree, but I don't think I have the language to do that, to actually take those feelings from the tree and put them out there.

Lee Ann -- Some people are writing about emotional intelligence, are you familiar with that?

"Ann" -- Yes.

Lee Ann -- So when I think of feeling, I think of emotion and if this doesn't equate for you I would like you to restate it for me. Feelings are emotions; emotion is a form of intelligence so within what you are describing as feeling, the tree having feeling, is there anything about emotional intelligence coming out of that dialogue?

"Ann" -- I think that's what it is. I think that is the only way I am able to get words on the paper even though I don't know if they are the right words or if they are, because I don't think I have the right words. But I think it is that emotional intelligence that is making me think that I am not totally crazy that this tree is talking to me.

Lee Ann -- And how is that and intuition (similar), are they anywhere entwined or separate things? Earlier you talked about intuition was part of how you knew what the tree was saying.

"Ann" -- Right like it is coming here from your chest (points to her chest) but I feel like that is also the same place that the emotional intelligence that I have, I wouldn't say that it is a brain intelligence I think that it is a heart intelligence.

Lee Ann -- But it is different from intuition, is that what you are saying, or we don't know?

"Ann" -- I don't know if we know. I think it is the intuition that tells you're not crazy to be feeling like this.

There is a difference from a good feeling in your chest and a bad feeling and it is a good feeling which makes me think...when I go to that place and I am making these things I'm not having bad feelings which tells me that it is a good thing that is happening and that is why I think, I don't know, I don't think of emotional intelligence as a bad thing that we have, but it's somehow justified, in the feeling that I have in my chest.

Lee Ann – (like) One-person's bog is another person's forest?

"Ann" -- It depends what a person gets out of it.

Lee Ann -- If the experience is meaningful to them?

"Ann" -- Yes.

APPENDIX I

"Donna's" Narrative and Dialogue With the Landscape

At the Bainbridge Island Research Site

12.04.04

"Donna's" Narrative With the Landscape

J shaped branches secures me in my place cut off my view and allow me to focus on two small sections of forest wetland pools of water support life beyond measure.

Bright light, green wetland grasses attract, reflect, and bring in light, bright blue sky, uninhibited makes this a day to be alive, awake and here.

So much to be done, but no better way to spend this moment with the sky, my gift for today, a surprise after a rainy morning.

Cedar needles fall onto my page as I write covering me up like the ground below. Who knows where soil begins in this place. Move around only seems to be piles of discarded trees, ready for winter. The ground slowly turns brown; all the same color as more and more green fades into and becomes it. The moss covered logs break up the wetland, its shallow reflective pond reveal perfectly the (sic). And fallen leaves mixed with cedar branches.

Sword ferns grow in the edges bigger then the lichen covered stump, layering the ground and thriving in this environment. The wetland bottom keeps taking in (sic) soon it will absorb the fallen log too, like quicksand.

I don't dare disturb the water so perfectly still, clear and full of decay only noticeable that it is water at all because of its glassy surface.

Blue sky still but the sun gets lower only one p.m. and already day is getting ready to go to bed an unmistakable sign of the season in this land. Birds come more … and boisterous. They know they only have a little bit of time left to play. The water is still running a steady and fast pace. This land connecting all, bringing me downstream to it even though I try to stay up here above it as my fingers grow colder and tire of writing.

"Donna's" Dialogue With the Landscape

"Donna" -- Why did I choose this place underneath the tilted cedar tree?

Sitting on its trunk and decay protected like a small animal, safe and warm, enclosed and sheltered enough openings through its branches and needles to have cool sun on my winter day. Sunshine, the best kind of sunshine, penetrates to our base, drawn to the green grass first, by vision tree draws me because of a feeling.

"Donna's" Response To the Question: What Is Your Sensorial Experience In the Landscape?

"Donna" -- My sense of sound

2 small birds have a conversation close by

A Douglass squirrel chimes in again

The rushing stream (sic) not far enough off

The birds edge closer, I'm not disturbing them but a part of their natural sounds and.

The wind blows cedar needles and even in this enclosed space, seeps in but more rush of the stream is the constant sound must powerful sound of all

Frog croaks far off

"Donna" -- My sense of smell

Cold air, the cedar and freshness of outdoors

Water and wind

"Donna" -- My sense of feeling

Stump and roots made a comfortable seat by decaying cedar needles, sword fern fronds, fallen alder leaves. My hands are chilled and hard to make use of but my body is warm amidst layers that make my body noisy and less agile, but comfortable in the seat. The cedar grows sideways to make a seat just right for my rump and cuts alternate niches in the

mud and decay and hold-up my water bottle and materials amidst this wetland held in place by an overgrown cedars roots.

5.22.05

"Donna" -- What can you tell me today?

Landscape -- That I am alive again – in a more (sic) way than December. I am announcing my life to you in every way – in the jungle around the decomposing matter hidden by pools of rain water and yesterday, and now clearly visible with the banana slug at (sic) your feet. I am alive today in the small dugout duff where another being has now made it's home.

"Donna"

" -- Am I disturbing you by being here?

Landscape -- your spot is taken now. You were not here so this animal has found itself the home you visited one day. But notice how your … is still here, your canopy and the soft seat on top of my roots still perfectly fits you in this space. Your seat has not changed except here it is speckled with green limbs from my cedar tree, green helicopters from a maple near by. Last time you craved the cover and warmth of the tree's shelter.

"Donna" -- I came … No appreciate I did, but not in this slow, still way. Today I crave sunlight more openness. This tree … blocks my view … Today it is spring like, warmth, light. But I also still want to know this spot in the spring. I contemplate moving to the other side. This cedar as time is right for me…. Less coverage. But the seat is not so perfectly fitting to me and I like the idea of sitting on the roots of this tree.

The birds, different birds sing today, everything is greener to day and it is difficult to recognize certain parts of this place, but I easily know that it is the same place, easily find my seat. The path I took to it I even recognized that I can walk in what was wetland in December. I quickly recognize the angles of the logs the exact J shaped branches at the cedar, unchanged and of course the …. Tree stump with the one …, still the same color, same moss, and same face.

"Donna" -- Have you changed?

Landscape -- All this life was within me in December. It was in the wetland puddles, it was below the surface , in the knots of the trees and all around. Life was here, underneath, beneath, waiting and living unassumingly, hiding from the passerby. All that you see now was here before, only in a different way, looking for the same shelter you … on the roots, under the branches of the cedar tree that day.

"Donna" -- Light plays across my page. The wind pushes trees back and forth. I can even fell the ground beneath me jolt when something falls. But as I look out through the branches of the cedar tree, I see more light today. The green of the deciduous , light , playful, thin happy. … as practice or height as the cedar branches around me.
"Donna" -- What is here for me to see today?

Landscape -- The salmonberry, taller than you, growing in the middle of the December wetland. Today, you think it would/could grow here?

"Donna" -- so many changes and I have missed them. Is this cedar more sideways? Has … pressure pushed it farther toward the earth? I can' tell. The wind makes it cold clouds chase the sun and it feels like December now and then. It is spring today, but the weather doesn't always speak it. And with the gusts of wind it feels like it might be the same day. When I look at my paper and can't see the green outside of my sheltered spot, things feel the same. But I have also changed while I was away. I pause to ….a millipede cross the mossy log below my feet. He crawls down the log … sideways, defying gravity and then circles upward again. It is hard to keep my mind on one thought now. There is much more to write, to draw, think, and feel than there is speed in my hand.

"Donna" -- What changes you ask me? (write after looking and reading my things from Dec.) My pictures and writing remind me that this cedar has grown. That the daylight

today is much higher than the winter … that the green covers my vision and I can actually see less today than in December. That the stream sounds distracted me from my spot before, today it is the mosquitoes.

But how have I changed you asked? Sending me just wind, but now rain my way. Many good ones I am sure, but for the last month my focus has been on the negative ones. Another year here, I say and I can change for the expositive again, my two goals for the future year I need. I whisper them to you, this paper doesn't need to hear them.

The rain comes down. I know because I can hear it. But you shelter me. I am glad I stayed in this same spot. I am dry and protected here. The mosquito still buzzing in my ear. You send a maple helicopter to tap me on my shoulder. What are you trying to say?

When I come back here next time, I promise before I leave your place, long before those changes will be made you will feel them when I sit back on my seat.

"Donna" -- My time today is almost up, is there anything else?

"Donna" -- The sun comes back out even though it is still raining. I moved for a bit to draw and it poured. When I got back to my spot sun was on my paper again and my seat was dry.

You are alive and healthy today, absolutely full of life and full of action. I can make those changes too.

APPENDIX J

Erin's Narrative and Dialogue With the Landscape At the Bainbridge Island Research Site

12.04.04

I am sitting on a fallen young maple tree covered in a bright springy green moss like the color of green apples. There is a perfect spot at the base of the logs …root system for me to sit. One of the broken off roots protrudes upward beside me like a talking stick. The floor is covered with a mixture of sienna and dark brown maple leaves in the process of decaying. Their layers feel like well-padded carpet underneath my feet. Directly in front of me I spot deer scat left by one of my gentle friends presumably after drinking her fill from the mini wetland I am studying. I also see maple seeds mixed in with the hundred of leaves.

A songbird is singing maybe fifteen feet away from me. She's rejoicing the sun being out after five days of rain. In back of me I can hear the water making it's way downward through the creek that helps keep this place so wet.

The colors are varied, mostly different shades of green and brown. Alder trees are pushing their way upwards while providing the nitrogen to this once disturbed cite. Their leaves are few on the ground compared to the big leaf maples. A wind gust just came through and dropped some more leaves around me. I love the smells of this place. It's

musty. I think to myself if I were to lift up those leaves, "what kind of life would be busily helping them decompose. Gust of wind hit me from behind reminding me how cool it is out.

Directly in front of me is a mini wetland – maybe 15 feet by 15 feet. The tall reed grasses designate the fragile area. My eyes are drawn to them and the browns of the maple leaves. The water is like glass on a mirror with occasional ripples moving through it.

5.22.05

"Erin" -- What is this spot trying to tell me?

Landscape -- I have a spirit if you sit still long enough you will feel it.

"Erin" -- What do you mean by feeling it?

Landscape -- There you go again, thinking. I said feel it not conceptualize it. Old grandmother maple tree whispers to me, you don't stop very often do you? When's the last time you even sat still? Look at me! My leaves and branches move softly, but with the air not against it. Flow instead of push. Let things around you happen to you. My trunk is centered yet you can see the scars I have. I have allowed others in.

"Erin" -- I am not very good at letting others in or near me. What's your secret to being open Grandmother?

Landscape -- I sit still.

"Erin" -- Don't your scars in your trunk hurt?

Landscape -- No, gives me character.

"Erin" -- I notice you have small children growing out of the base of your trunk.

Landscape -- You sure like to see the world around you rather than feel it. Once again you have to be still to feel things. Get out of your head.

"Erin" -- It's hard when I am trying to have a dialogue with you to get out of my head. I think I will stop talking to you right now and just listen and feel.

(Silence)

"Erin" -- I like this spot, it's cozy. I feel enveloped by the earth and the plants around me. But I also have some open spaces. There isn't so much underbrush. Underbrush unsettles

me. I feel closed in. When I look at all those thorns on you, I get nervous. I like being able t o turn in circles, stretch my legs. How many layers of dead leaves are underneath me? I seem to be focused on what is at eye level or on the ground underneath me. Is it my hat's bill that is keeping me from looking out and up? What is holding you up cedar? Is it your roots or the layers of dead leaves and soil? Maybe it's more than that.

Landscape -- Why aren't you thinking about my spirit instead of all my external parts?

"Erin" -- I think it is because I am studying science and I get caught up in breaking things down and apart rather than just feeling them.

Landscape -- Hmmmm, interesting. You were much better at listening and feeling before you started all this studying of us. You seem to think you know a lot more about us. Somewhat of a know it all? We don't reveal all. We have our secrets, our mysteries that belong to us. We reveal it to those who can listen instead of talking, to those who can stop sit still and feel, instead of pushing through us like we don't matter. We try to call out to you so many times, "Erin, but you are on to the next thing rather than being present.

"Erin" -- I just realized that this spot will (sic) probably be here long after I am gone and dead. The log in front of me will out last me; such as it is decaying and returning to the earth.

If I was that nettle, would I have a better sense of purpose? Would I know what I am here for? Would I be more aware of myself? More aware of others around me? If I were that Grandmother tree would I be more accepting, proud of my aging skin and scars? I'm still standing and that's what counts, she says to me.

Landscape -- I give a home to thousands of thousands of critters. When I was a young sapling I could only house myself. I would have never been able to experience and get to know the world around me, if I didn't let myself get old, craggy, scarred, and dirty.

APPENDIX K

Summary of Three Co-Participant's Experience

"Ann's,'" "Donna's" and "Erin's,'" responses to the final day of image making at the Bainbridge Island research site

5.22.05

Lee Ann -- Describe a little bit about your process today.

"Donna" -- I wrote first at the same spot I made images at in the winter. The drawings I brought with me from my first session did not trigger anything. Today I dialogued with the land. I described the place in the same way, yet things were different. I was more restless today. I had to move. I made the new images from a different spot.

"Ann" -- I felt intuition kick in when I heard the sound of rain and began to shiver, I wanted to find shelter. Writing prompts would have been good. I began writing first. I looked back at the drawings from my first session, realized I was writing the same thing. Then I drew about color. Last time my work was more about form. Today I dialogued half of my time with the land and half with the images.

"Erin" -- I chose to go to a different site today then where I was in the winter because my original site felt more exposed, this one was cozier. I noticed the open space. Today I dialogued with the land, specifically the tree. (I sensed) movement through space in the landscape.

"Ann", "Donna", and "Erin" spoke more on their process. My recording was as a group conversation with no distinction as to who said what.

-- The process was non-linear, easier because I've don it before, more familiar, felt more of a purpose.

-- I started a (new section) of observation then went into letting sensory observation take over.

When I asked the 3 co-participants what it felt like to have a dialogue with the land or with the images, all felt like they were having a real dialogue.

Lee Ann -- How did you know it was time to quite?

-- I felt done, nothing else I can do here. My body knew it first.

APPENDIX L

Matrix Used for Analysis of Co-participant's Data

NAME	FOUND IN NARRATIVES	FOUND IN IMAGES	MY OBSERVATON
"Ann"			
New Awareness	-Could really sense the gestures, the patterns of the cedar trees and other organisms in the landscape. -She felt she was more able to articulate the knowledge she gained from practicing the multiple ABPE exercises: in words rather then in the image making. -Dialoguing with the landscape gave her insight to "both sides" of the story."	-Image making began the process of translating her embodied knowledge. -Was aware that the land has a language and was able to read the gestures of place. -Saw the patterns be repeated in many of her images. -Recognized the image making brought one level of the knowledge gained of this place to a conscious level. –The repeated pattern of the cedar's branching system represented in her images by the "J" concretized her awareness that the land holds knowledge.	-She was very open to the dialoguing process and expressed how she felt she was having a real dialogue, with the land.

NAME	FOUND IN NARRATIVES	FOUND IN IMAGES	MY OBSERVATON
"Ann"			
Acute Sensibility	-Use of metaphor in her writing and symbolism in the image making, helped her to look at the tree in a different way—"it appeared different."	-When practicing ABPE she was able to connect to the place at different levels. -When making images, she recognized it caused her to slow her pace and notice detail in the landscape that she otherwise would not have done if not practicing ABPE.	-The image making and dialoguing process opened her to both sides of the land's story.
Embodied Knowing	-Recognizes she knows what she knows about the forest, in her body. And as an extension of the ABPE practice she could know it more if she did an interpretive dance.	-Knows that she knows something, but does not have the words to express the knowing to others. -"I can know something because I can know it as I know my own body." -The image making took her outside her "scientific mind."	-She says through words she is able to articulate her embodied knowing, yet I believe the images have provided a foundation for her awareness.

NAME	FOUND IN NARRATIVES	FOUND IN IMAGES	MY OBSERVATON
"Ann"			
Understanding Concepts of Landscape Ecology	-Came to a new understanding of patterns in the landscape, which offered her a new perspective of the forest system. -She knew she had a new understanding of the land, because she was able to teach her new knowledge of trees to others.		-Learning the other side of the story through image making and the dialoguing process allowed her to know the land's stories in multiple ways.
Understanding of Magic			
Use of Intuition	-When it began to rain, she experienced a physical response and acknowledged her intuition gave her more insight as expressed in her narratives.	-Acknowledge the image making brought her experience and the knowing that came from it to a conscious level.	- I sensed she had an intuitive feel for points of energy in the landscape and grounded herself in those places.
Use of Imagination	-Explored worlds beyond sight alone when addressing the place through the dialoguing practice. -Was able to open to the world of the "Other."	-Did not imagine her self in the landscape, but was infused in the place through her senses and imagination	

NAME	FOUND IN NARRATIVES	FOUND IN IMAGES	MY OBSERVATON
"Ann"			
Use of Metaphor	-She had an awareness that she expressed in her narratives that she knew the form of the "J" as "backbone and ribs." -She was able to hold this awareness by metaphorically comparing it to her own backbone and ribs.	-Used a symbolic language when making images, which expressed the gestalt of the place and specifically the cedar tree.	
Use of Emotional Intelligence	-Trust in her heart connection which makes her know the dialoguing process was real.	-The image making tapped her into a heart connection, which allowed her access to the tree's feelings.	-Image making was a way to give meaning to her experience. -She was concerned that she might not be feeling enough.

NAME	FOUND IN NARRATIVES	FOUND IN IMAGES	MY OBSERVATON
"Ann"			
Use of Science Language	-Had a command of the science language which came from a formal education.	-Not sure if she knows (the trees) because of her scientific knowledge or the image making process. Understanding the source of the knowledge becomes kind of a gray area for her.	-I saw how she used a scaffolding method with the ABPE. She clearly felt there were multiple levels of knowledge construction when practicing ABPE. -She experienced multiple levels to ABPE: first level based on book knowledge. Image making allowed her to access it from the next level down, a deeper level. Then next comes the dialoguing process, bringing her to a deeper level of knowing.

NAME	FOUND IN NARRATIVES	FOUND IN IMAGES	MY OBSERVATON
"Ann"			
Use of Art Language	-First time at the research site, she presented her ecological perception of the place through color. The second time was more about representing the form and structure of the landscape. This can be clearly seen in her images when practicing the abstraction exercises.	-Questions arose when practicing ABPE, this took her to a deeper level of knowing. She says she could not have gone to this deep understanding through Western science alone.	-Reading her art language, I can see the aggressiveness in her mark making, an element of tension between subjects. I recognize this as a symbolic representation her unconscious understanding of the energy of the place.

NAME	FOUND IN NARRATIVES	FOUND IN IMAGES	MY OBSERVATON
"Bill"			
New Awareness			Multi-level process of ABPE offered a deeper understanding of the interconnectedness of water as part of the life cycle in this ecosystem.
Acute Sensibility	-Had a good grasp of words as seen in his articulation of the phenomenon he was a part of.	- Accessed his sensory experience when practicing ABPE. –This caused a perceptual shift which caused the "water droplet" to take on new associations and meanings.	-Image making allowed him to actively live through an "ecological event," the birth of water.
Embodied Knowing		Deconstructing what was in his immediate view, brought an awareness of the essential qualities of the landscape.	
Understanding Concepts of Landscape Ecology	Understood life force "autopoiesis" in forest ecosystem.	Understood the birth of water. Image made the relationship between systems visible.	

NAME	FOUND IN NARRATIVES	FOUND IN IMAGES	MY OBSERVATON
"Bill"			
Understanding of Magic	Experienced world of the Other.	Entered parallel world, entrance to the Other by giving whole attention—brought about by image making.	Experienced ABPE as an intermediary, bridging the gap between two worlds.
Use of Intuition	Entered the spirit of place through a sensorial relationship with place—was able to articulate through poetry.	Through repetitive image making a relationship began to form unconsciously.	
Use of Imagination		Did not imagine himself in the landscape, but was infused in place through senses and imagination. Filled in the unknown with stories of probability.	
Use of Metaphor	Used metaphor to translate his understanding of water: "a water droplet giving birth."	Bridged gap between conscious and unconscious.	Practicing the abstraction exercise metaphorically represented the evolution of the place.
Use of Emotional Intelligence	Brought his feelings to a conscious level articulating his emotion of the place.	Made a connection unconsciously when sitting with place practicing ABPE.	

NAME	FOUND IN NARRATIVES	FOUND IN IMAGES	MY OBSERVATON
"Bill"			
Use of Science Language			
Use of Art Language			

NAME	FOUND IN NARRATIVES	FOUND IN IMAGES	MY OBSERVATON
"Carl"			
New Awareness			Took in an internal felt sense of the lands system of decomposition.
Acute Sensibility			Image making and the written exercises allowed him to actively live through an "ecological event."
Understanding Concepts of Landscape Ecology	Understood elements of the life cycle of the forest system.	Understood elements of the life cycle of the forest system.	
Understanding of Magic			
Use of Intuition		Felt the "decay" – became the decay.	
Use of Imagination			
Use of Metaphor		Expressed a tacit knowing of the cycle of decomposition.	
Use of Emotional Intelligence	Embodied knowledge taken to conscious level.	Took the feelings of decay in his body	
Use of Science Language			
Use of Art Language			