

**REFLECTIVE JOURNALING AND NATURAL HISTORY AS TOOLS FOR
DEVELOPING ECOLOGICAL IDENTITY**

By

STEVE SHORTT

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We accept this thesis as conforming to the required standards:

Sharman Learie (MA.), Thesis Supervisor, Dept. Adventure Programs

Lyn Baldwin (Ph.D.), Dept. Biological Sciences

Kellee Caton (Ph.D.), Dept. Tourism Management

Mark Rowell Wallin (Ph.D.), Co-ordinator, Interdisciplinary Studies

Dated this 29th day of April, 2014, in Kamloops, British Columbia, Canada

ABSTRACT

The autoethnographic nature of this research combines my personal experience and reflections as the primary participant in a qualitative analysis on reflection and identity development. This research paper will explore the use of reflective journaling, combined with natural history practices, as effective tools in developing an ecological identity. The literature review will explore experiential learning, reflection and reflective journaling, and natural history practices and methodologies which, when combined, form a holistic understanding of this research. Biophilia and ecological identity will also be explored to further the understanding of what constitutes a meaningful relationship with the natural world and how we see ourselves in relation to it. I will analyze two journals that I wrote over an eight month period to attempt to identify development of reflective ability and the existence/development of an ecological identity within myself. This research is significant in demonstrating value of qualitative research, and will ideally assist me in understanding how I can address the crisis of perception between economy and ecology within myself, and in turn, how I can promote this understanding in others.

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RESEARCHERS PERSPECTIVE

My early connections to nature came from exploring the forest with my father, friends and family dog. A local scouting program further taught me respect and gave me the confidence to explore the surrounding land with an ethic of care. The decision to enroll in the Outdoor Adventure Naturalist diploma program was a fruitful one, and equipped me with the skills necessary to better interpret the natural world and share these understandings with others. As I moved away from rural areas into the urban world for work and education I began to notice more frequently, the disconnected actions of an economically driven society. My endeavors to rekindle sparks of wonder and ecologically mindful actions among friends, and even family, often fell on deaf ears, and I understand now that without an ecological identity, knowing yourself and your relationship with the natural world, it is very difficult to foster or maintain a connection with nature. (Chawla, 1998, 1999, 2006)

Having inherited chronic stressful and overthinking behavior from my father, I realized early on that I would have to find a way to cope with this tendency, lest it eat me alive. After waking up week after week with a sore jaw and cracked teeth from sleep grinding, I decided I'd had enough and sought solutions. I took a page from Dale Carnegie's (1948) teachings on stress, and began writing before bed each night, only to find that my jaw clenching and teeth grinding stopped completely. Writing changed my physical behavior. My bedtime notepad gradually evolved into a casual reflective journal. I found that my reflective journal often forced interaction with my own identity, which proved soothing in times when I began to feel disconnected from myself. Sometimes I found that writing reflectively revealed motivations and ideas, I had not realized were a part of me. My reflective journey revealed the ability to engage deeper thought once pen hit paper; it helped to keep me aware of myself

and be more mentally present in my daily interactions and decisions, and most importantly, it has heightened my understanding of self. I believe reflective journaling will be a lifelong practice of mine and will continue to assist in self-realization (Naess, 1995) with patience and practice.

As a future educator, who has had many opportunities to engage with school programs and volunteer in classrooms, I have seen a worrisome trend of the elimination of arts, natural play areas, creative free-time and journaling. I strongly believe that these activities assist in identity building, and give students opportunities to engage their own, unique selves. It is my belief that if schools do not provide time and space for character building, identity formation/ engagement, and creativity, that we will see various negative effects including lower self-confidence, less belief in self and ability, and less awareness of self, which not only affect the future of the individual, but the people, and environment, around them (Louv, 2005).

My own experiences have shown me the value of direct, hands-in-the-dirt experience, reflection, and placing one's self within the world. I believe my experiences continue to strengthen my foundation, providing me the ability to grow further and confidently explore the world around me. In a world where sustainable practices are becoming more important and where children are becoming more disconnected from nature/ the world around them, I see the necessity for an aware and ecologically minded society. This research is an introspective examination of my own journey to develop an ecological identity (Thomashow, 1995), and an exploration of one possible method to reconnect personal identity, and the natural world.

RESEARCH QUESTIONS AND OBJECTIVES

As this is a broad, multi-disciplinary topic, I chose to focus this research on the following questions:

1. Has reflective journaling been effective in promoting the growth/development of an ecological identity?
2. Is there efficacy in combining reflective journaling and natural history practices/methodologies towards the development of an ecological identity?

Objectives of this research include:

1. Creation of literature review.
2. Creation of a reflective journal.
3. Analysis of personal reflective journals in regards to research questions.
4. Recommendations for future journaling practice.

LITERATURE REVIEW INTRODUCTION

The purpose of this literature review is to highlight the inherent connection between experience, learning, and reflection through an exploration of experiential learning, reflection and reflective journaling, biophilia and ecological identities, and natural history. After defining these concepts and their methodologies, I believe the research will show how these practices can lead to the growth of an ecological identity, while transforming the learner from a passive observer to an active participant in learning and meaning making. This research

will inform how I will later review and assess my own reflective journey. The literature review is organized as follows:

Experiential Learning: In this segment I bring attention to various components of experiential learning to create a foundation for understanding this process. I highlight numerous components of this learning practice to note the prevalence of shared concepts and qualities that experiential learning shares with the subsequent segments of the literature review. This portion concludes with a working definition of learning.

Reflection and Reflective Journaling: In this section I discuss the difficulty in defining reflection and note the importance of experience in the reflective process. Connections between reflection and experiential learning theory are noted. Commonly accepted elements and antecedents of reflection are identified, and a working definition is developed. The use of reflective journaling as a learning tool is discussed, as are the various benefits and outcome of reflective journaling practice. I identify possible pitfalls of reflective journaling and how I will attempt to mitigate these possibilities. I also identify and discuss a method of assessing a reflective journal, for later use in assessing my own work. Goals of reflective journaling are highlighted to display interrelatedness and inherent connections to ecological identity and natural history.

Nature/Biophilia/Ecological Identity: At this point in the literature review, it is my intention that a number of themes will have become apparent including; concepts of identity growth, learning and reflection as processes, observation, the importance of experience in learning and reflection, and the goals of a reflective thinker/writer. In this segment, a working definition of nature is identified as are nine nature values. A foundational understanding of

nature is imperative for recognizing the importance of and the need for an ecological identity. The concepts of biophilia and ecological identity are defined and discussed, followed by their relation to important themes in the literature review. Natural history is introduced as a possible tool for achieving the goals outlined in this research.

Natural History: This section of the literature review defines the practice of natural history and weaves together important concepts from previous portions of the literature review. Identity growth, process based learning, reflection, observation, and direct experience are tied to this immemorial, multidisciplinary science. The methodology of natural history is described as is the inherent human connection to this practice. This section is concluded with a suggestion of how natural history can be used to achieve the objectives outlined in this research.

As a whole, the literature review exhibits a broad understanding of current research regarding experiential education, reflection and reflective journaling, ecological identity, and natural history; and how they relate to this study's research questions and objectives.

EXPERIENTIAL LEARNING

*We shall not cease from exploration
And the end of all our exploring
Will be to arrive where we started
And know the place for the first time.
(T.S. Eliot, Four Quartets)*

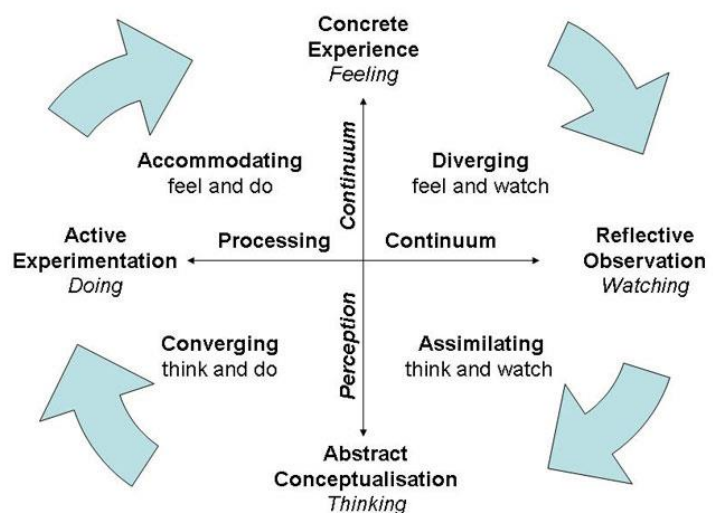
For the purposes of this research, reflection plays a prominent role in experiential learning models, as well as in learning that is grounded in experience. Experiential learning is an ongoing process which requires active participation in it on the part of the learner.

Experiential Learning can be considered an alternative education format as it is fundamentally different from traditional educational methods, in that traditional methods for the most part are based on rational idealist epistemology, do not include experience as central to learning, and focus on outcomes (Kolb, 1984; Novak, 1960). Kolb posits that experiential learning is called “experiential” to tie it to its intellectual origins in the work of Dewey, Lewin and Piaget, and to emphasize the central role that experience plays to the learning process (1984). Experiential learning focuses on process, rather than outcomes (Dewey, 1938; Bruner, 1966; Kolb 1984; Allison & Wurdinger, 2005; Clark 2006; Clark, 2009), as experiential learning should be a continuous process (Rogers, 2001); “a continuity of experiences” (Bacon, 1987) with no fixed outcome other than the desire to continue learning and growing. Experiential education encourages reflection and reorganization of meaning of past experiences and makes conscious use of the learners experiences (Carver 1996; Lewis & Williams 1994) to “develop new skills, new attitudes, or new ways of thinking” (Lewis & Williams, 1994, p. 5). This reflection on and reorganization of past experiences / beliefs / meanings connects experiential learning deeply with constructivist theories of learning (constructing knowledge through real life experiences and experiential learning) (Fosnot, 2005; Klein & Merrit 1994).

While experiential learning can be employed anywhere at any time, its use in the classroom was “given a boost when Chickering and Gamson (1987) recommended ‘active learning’ as one of the seven ‘principles of good practice’ for excellence in undergraduate education” (Lewis & Williams 1994, p.8). Experiential learning requires the active participation of the learner (Novak, 1960) in the learning process, as opposed to requiring the learner to be a passive observer in the acquisition and memorization of textbook knowledge.

Experiential learning is best employed holistically involving “the entirety of the students: mind, body and spirit” (Cooper, 1994, as cited in Maguire 2013) and the “fullest complement of an individual’s mental, emotional, and physical resources” (Walsh, Golins, 1976). In order to envelop a learner in the experiential learning process, the physical environment that he/she is in should be one that engages them on multiple levels. Walsh and Golins (1976) state that by entering into a contrasting environment (one that is unfamiliar to the learner), the learner has taken his or her first step towards reorganizing the meaning and direction of his experience. Being in the outdoors for example, encourages a learner to refine his or her senses, exercise self-awareness and self-responsibility (Walsh, Golins, 1976). Kolb’s (1984) Experiential Learning cycle serves as a standard for understanding experiential learning. This process addresses the fact that no two learners learn the same way, just as “no two thoughts are ever the same, since experience always intervenes” (Kolb, 1984). The model provides two modes for grasping experience (Concrete Experience, Abstract conceptualisation) and two modes for transforming

experience (Active Experimentation, Reflective Observation) ”(Kolb, Boyatzis, Mainemelis, 1999). This model is useful for visualizing the different ways in which we take in and process information/experiences, which I believe will assist me in



Kolb's (1984) Experiential Learning Cycle Model

becoming more critical, and aware, of how I learn. According to the model, “immediate or

concrete experiences are the basis for observations and reflections. These reflections are assimilated and distilled into abstract concepts from which new implications for action can be drawn. These implications can be actively tested and serve as guides in creating new experiences” (Kolb, Boyatzis, Mainemelis, 1999). Dewey’s model of experiential learning, Piaget’s model of learning and cognitive development, and Kolb’s Lewinian experiential learning model (which has been expanded upon in Kolb’s experiential learning cycle above) “suggest the idea that learning is by its very nature a tension- and conflict-filled process” (Kolb, 1984,p.30) and that “learning results from the resolution of these conflicts” (Kolb, 1984, p.29). All of the aforementioned models are presented as a continuous cycle, where the learner is motivated to continue reflecting on/ reinterpreting experiences and becomes oriented towards a life of reorganization of meaning and learning (much like the Outward Bound Process Model created by Walsh and Golins in 1967).

Based on the referenced literature, it is clear that experiential learning is process oriented, requires raw experience and reflection on these and past experiences, is conflict-filled, and engages the active learner on various physical/mental/emotional levels. In regards to a working definition of learning for use in this paper, I will use Kolb’s 1984 definition in which “learning is the process whereby knowledge is created through the transformation of experience”. This definition serves as my basis for understanding learning, and the role of experience in learning, and will inform how I connect it to the subsequent topics in this research. “Experience provides the raw material for thought; in the absence of new information gained by personal experience, reflection can become a repugnant and pointless activity” (Kalisch, 1979, p.69-70 as cited in Bacon, 1987, p.18). Based on referenced experiential learning theory and the above quote from Kalisch (1979), it can be suggested

that a stronger understanding of reflection could provide a stronger understanding of how, and how much, we learn. I believe use of reflective journaling combined with experiential learning provides a pedagogical model to enhance understanding.

REFLECTION AND REFLECTIVE JOURNALING

“Reflective thinking is always more or less troublesome because it involves...willingness to endure a condition of mental unrest and disturbance”

-John Dewey (1910, p.13, as cited in Clark, 2009)

This portion of the literature review will define reflection, and discuss the practice of reflective journaling. In the previous discussion of experiential learning, reflection was shown to be an integral piece of the experiential learning process. Note in this section the importance of experience in the reflective process and the commonalities between reflection’s definitional elements/antecedents, and those in experiential learning theory.

Russel Rogers (2001) writes that although reflection is a popular topic in educational literature, and a popular tool used in educational settings, the myriad of names and terms that are being used to describe the reflective process (and reflection itself) reveals that the concept of reflection is actually not well understood in educational circles. Some of these terms include: “reflection-in-action (Schon, 1983), metacognitive reflection (Fogarty, 1994), reflective learning (Boyd & Fales, 1983), critical reflection (Mezirow & Associates, 1990), reflective thinking (Dewey, 1933), mindfulness (Langer, 1989;1997).... introspection (Sherman, 1994) and meditation (Holland, 2000)” (as cited in Rogers, 2001). In order to further research on the topic of reflection, an agreement on what constitutes reflection, how it is defined, what its outcomes and processes are, and what the conditions needed for reflection

are need to be clarified. Rogers (2001) identified several common definitional elements of reflection in his review:

1. reflection as a cognitive and affective process or activity
 2. active participation/engagement of the learner
 3. (reflection is) triggered by an unusual or perplexing situation or experience (can be related to flow state and cognitive dissonance)
 4. (reflection) involves examining one's responses, beliefs, and premises in light of the situation at hand
 5. (reflection) results in the integration of new understanding of one's experiences
- (p.41) (also a common thread in experiential learning theory, Priest & Gass, 1997; Walsh & Golins 1967, Bennion & Olsen, 2002, Gass, Gillis & Russel, 2012)

Common antecedents for reflection that most authors agree upon include:

1. an event or situation beyond the individual's typical experience must occur if the reflective process is to be triggered
 2. the individuals readiness and willingness to engage in the reflective process
- (Rogers, 2001)

From this information, it is apparent that environment (which includes the learner, other learners, the experience, the physical environment etc.), which is so important to experiential learning, is also critical in fostering reflective practice. A common requirement for a positive environment that is conducive to reflection and experiential learning is one that is both challenging and supportive (Walsh and Golins 1967; McKenzie, 2003; Rogers, 2001; Clark, 2009). Rogers (2001) finds that the generally agreed upon outcome of reflection, if

there must be one, is learning. “Reflection helps the individual to learn from experience because of the meaningful nature of the inquiry into that experience” (Loughran, 1996). As for a working definition of reflection, I have combined definitions created by Dewey (1933, as cited in Clark, 2009), Redmond (2004 as cited in Clark, 2009), and Rodgers (2002, as cited in Clark, 2009). I feel that this collaborative definition better reflects Rogers’ (2001) elements of reflection and further illuminates important auxiliary components (and desired outcomes) of reflection. The working definition is as follows:

Reflection is an active, persistent and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and the further conclusion to which it tends (Dewey, 1933) and empowers individuals to see through their habitual way of experiencing everyday life (Redmond, 2004), which allows for reconstruction and reorganization of experience which adds to the meaning of experience (Rodgers, 2002) (definition adapted from Clark, 2009). Note in the previous definition, the pervasiveness of experience, and how important it is to understanding and participating in reflection and reflective practice. The definition suggests that experience is required to participate in reflection and in turn, affects how one experiences the world. This emphasizes the importance of (direct) experience in learning and reflection, and subsequently, in how experiences can change our perception of the world around us.

(Reflective) journaling appears throughout the literature as a tool that can be used to foster meaningful reflection and learning (Rogers, 2001; Lambirth & Goouch, 2006; O’Connell & Dymont, 2003; Wallace & Oliver, 2003; Clark, 2009; Kerka, 2002; Boud, 2001; Kremenitzer, 2005; Hampton & Morrow, 2003; Shoffner, 2009). Shoffner (2009) writes that reflective journaling can be an effective way for tracking emotions and emotional

states, which is especially useful for teachers. Dewey (1960) believes reflection also requires a person's attitude of open-mindedness, whole-heartedness, and responsibility to be present, which closely links reflection to the affective domain (Shoffner, 2009). Engaging reflection affectively, allows for growth and understanding of one's affective dimension and "allows for the acknowledgement of the interpersonal and intrapersonal dimensions of teaching, providing a space to examine the emotions that naturally emerge when working with others" (Shoffner, 2009, p.784). Understanding one's own emotions and the emotions of others, especially for a teacher, allows one to "change with the students as they change" (Shoffner, 2009, p.787) (which allows for better prescribed learning [Walsh & Golins, 1967]) and supports the theory that the emotional leads to the pedagogical (Shoffner, 2009; Burgess & Mayer-Smith 2011; Hubbs & Brand, 2005). Reflective journaling can keep us from becoming complacent in our practices, help us view situations from different angles and avoid falling into our habitual ways of thinking (Kremenitzer, 2005; Clark, 2009; Mezirow, 1998, as cited in Hubbs & Brand, 2005). My research will utilize reflective journaling to assist me in better understanding the environment and my relationship with it.

Reflective journaling can be used as a tool for self- appropriated learning, personal growth (Rogers, 1982 as cited in Hubbs & Brand 2005), and inner dialogue (Hubbs & Brand, 2005). In questioning prior beliefs, learning, and foundations of experience, reflective journaling can be a "significant adjunct in the transformative learning process" (Hubbs & Brand, 2005 p. 63). Bryan & Abell (1999) "assert that propositional knowledge, such as that found in methods textbooks or methods class discussion, can only be translated into practice through the reflective process"(p.163 in Wallace & Oliver, 2003). Reflective journaling, because it is inductive (Rogers, 2001), gives students (and teachers) the chance to

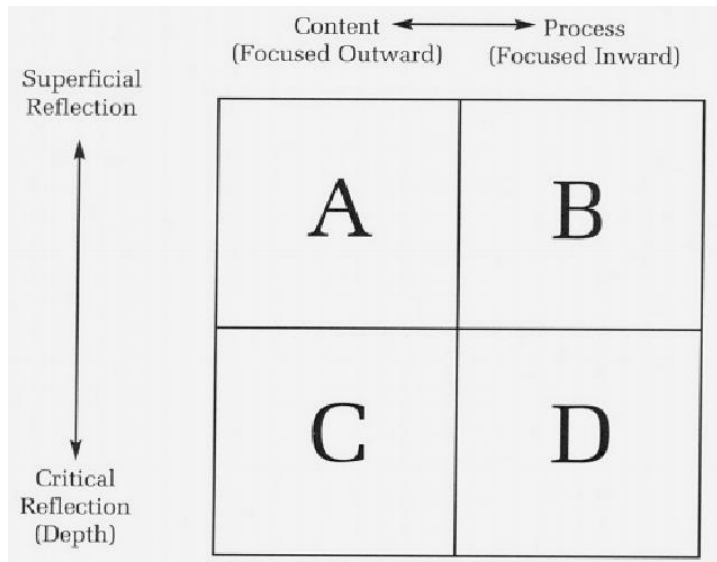
challenge/examine their personal beliefs, assumptions and attitudes against the professional hegemonic cultural and political context of education (Shoffner, 2009). This is empowering for the individual, and suggests complex thought processes /engagement with one's own identity.

Kremenitzer (2005) posits that reflective journaling can be used as a tool for promoting growth of emotional intelligence (perception skills, accessing skills, understanding skills, regulation skills). Potentially the most important benefit of reflective journaling and meaningful reflection is the learner's participation in meaning making and identity formation/growth (Clark, 2009; Kerka, 2002; Boud, 2001; Hughes et al. 1997 as cited in Hampton & Morrow, 2003; Lambirth & Goouch, 2006). Reflective journaling allows growth and recognition of individual voice and identity (Lambirth & Goouch, 2006), and gives the writer opportunities to make sense of the world and how they operate within it (Boud, 2001). The intent of this research is to utilize reflective journaling to expand self-awareness and identify my own ecological identity. However, journaling also presents numerous challenges both as a practice and within the scope of this research.

I have encountered several obstacles and frustrations in my personal exploration of reflective journaling practice. Many of these struggles are discussed in relevant literature and appear not only as obstacles to meaningful journaling, but as criticisms of reflective journaling practice. I feel it is important to highlight these criticisms, so that I may be mindful of them in my research, and potentially find ways to address some of them. Some criticisms of reflective journaling include falling into a loop of what Brookfield (1998) calls self-modulated introspection; "A self-confirming cycle often develops whereby our uncritical accepted assumptions shape actions that then only serve to confirm the truth of those

assumptions. We find it very difficult to stand outside ourselves and see how some of our most deeply held values and beliefs lead us into distorted and constrained ways of being”(p.197, as cited in Hubbs & Brand, 2005). This is why Hubbs & Brand (2005) suggest reflective journaling be taught in schools, and be carried out in a form of open, written dialogue between student and teacher (who must also be practicing reflective journaling regularly), whereby the student reflects on experiences or structured reflective questions created by the teacher, and the teacher comments/critiques on what the student has written, which the student can further reflect/comment on, or move on to a new discussion/reflection/experience. In this way, the learner is more likely to learn critical self-assessment (since the learner is not the sole assessor of his/her own work) and become more proficient in deep self-reflection.

Other concerns in reflective journaling include the worry that reflective journaling will eventually become a stagnant loop that only feeds our inherent narcissism (Lyn Baldwin, 2013, personal communication), the being unable to reach deep levels of meaningful reflection and be stuck in a “straitjacket of stylized conventional [writing] structure” (Wallen,1989 as cited in Lambirth & Goouch, 2006, p. 147), or simply using the journal as a superficial diary or record of events (Hubbs & Brand, 2005; Wallace & Oliver, 2003; Kerka 2002). It would be useful as a practitioner of reflective journal writing, to have a method of assessment that could be used to side step or address the discussed criticisms. Hubbs & Brand (2005) present a 2 x 2 matrix (see next page) that is designed for use by teachers (who are also practicing reflective journaling) to assess depth and process of students’ journal entries, or can be used in collaboration by student and teacher to plot journal entries on the content/process continuum. “Consistent use of Quadrant D statements suggests that the



Examples:

Content statement: “The Outward Bound Process Model aims to orient the learner towards a lifetime of learning” (focuses “outside” the student, based on fact or event)

Process statement: “I felt like my Outward Bound instructor did not take me seriously” (incorporates thoughts, feelings, attitudes etc.)

Superficial reflection: focus on content with no emotional value (see content statement example)

Complex reflection: integrates theory with personal and introspective insights

“Looking back, I feel as though my Outward Bound instructor was excellent at teaching hard skills, but did not seem comfortable, or even confident in facilitating reflective discussions, which affected the quality of what I took away from daily experiences” (examples are my own with guidance from Hubbs & Brand, 2005 examples)

student is demonstrating skills necessary for insightful or critical reflection...” (Hubbs & Brand, 2005, p.69). I believe this matrix can address the previously listed criticisms, and improve my journaling practice. Since I have not written my journal in open dialogue form with an experienced reflective journal practitioner, this matrix will help me to learn critical self-assessment, by assessing the quality and depth of my own entries using an endorsed assessment tool. Learning critical self-assessment will help to keep me from falling into self-confirming cycles, which should hopefully result in more frequent, meaningful reflection. Using the matrix has already kept me from using the journal simply as a diary or record of

events, as I move towards more complex and critical reflection. Wallace & Oliver (2003) write that reflective journal writers generally progress from observing/reporting to analysis/synthesis and eventually to evaluation (placing value on various events and actions). Getting to the level of “evaluation” in this process inherently suggests deep understanding of one’s own thought processes, and active participation of the learner in meaning making (by creating their own meaning of various events and actions through evaluation). Clearly, research on reflective journaling shows that it is a difficult and nuanced process, with no profoundly clear methodology. However, the critical assessment of journaling provides useful frameworks for determining efficacy of reflective writing on my personal learning.

To surmise the reviewed literature on this subject, the “goal” of the reflective journal writer is to get to a level where the writer places value on events and experiences, thereby locating himself in relation to the world around him, and thinking at a critically reflective depth in complex processes, which allows the writer to not only locate himself in relation to the world around him, but to begin to make meaning, to create new thoughts and experiences, from his deep understandings and reflections (and being aware of his place within the world). Deeper understanding of processes within one’s self, awareness/understanding of processes surrounding the learner, and locating one’s self within the world strongly suggests a connection between reflective journaling and ecological identity, which is significant to this research’s objectives, and will now be defined and discussed.

NATURE/BIOPHILIA/ECOLOGICAL IDENTITY

We abuse land because we regard it as a commodity belonging to us. When we see land as a community to which we belong, we may begin to use it with love and respect.

-Aldo Leopold, 1949, pg. viii

Thus far in the literature review we have explored experiential learning and the use of reflective journaling to expand self-knowledge and awareness. This research will add to the evolving dialogue around pedagogical practices that lead to ecological identity.

This section of the literature review will define nature and discuss what comprises an ecological identity and an understanding of biophilia. In the *experiential learning*, and *reflection* portions of this paper; experience, reflection, observation / perception, holistic involvement, and identity have been shown to be important pieces of the learning and growing process. Note the continuation of these concepts in relation to the natural world and ourselves.

“The study of the human relationship with nature is ‘big in scope’ and ‘interdisciplinary’ involving such diverse fields as history, science, policy, and human behaviour (Kahn, 1999, p.1, as cited in Burgess & Mayer-Smith, 2011, p. 28).” Research on the human relationship with nature is limited (Burgess & Mayer-Smith) but we do know that nature is best observed and interacted with, with appreciative attention (Chawla, 2006). For the purposes of this research, Kahn’s (1999) definition of nature will serve as the working definition; “Nature is a place to commune with living things, and, in our view, includes urbanized natural areas, parks, and pristine wilderness largely untouched by civilization.

Since humans are part of the natural world, human well-being is considered an environmental consideration” (as cited in Burgess & Mayer-Smith, 2011, p.29). Kellert (2002) identified and defined nine nature values. The nine nature values are as follows:

1. Scientific-Ecological: having or seeking knowledge and understanding of nature
2. Naturalistic: a focus on exploration and discovery of nature
3. Symbolic: nature used as a source of language and imagination
4. Aesthetic: physical attraction and appeal of nature
5. Humanistic: emotional bonding with nature
6. Negativistic: aversion to nature
7. Utilitarian: nature seen as a source of material and/or physical reward
8. Moralistic: value is expressed when people display an ethical and spiritual connection to nature
9. Dominionistic: mastery and control of nature (Kellert, 2002, as cited in Burgess and Mayer-Smith, 2011)

Someone who can identify the way they value nature (in relation to the above values for example) would suggest deep reflective and complex process oriented thinking, in which the learner is able to locate their place within the world. I believe these nature values will be useful in identifying how I value nature (within the analyzed journals available). As the reviewed literature regarding reflection and reflective journaling suggests, getting to the level of deep reflection and complex thinking, first requires a strong foundation in observing. The ability to observe, while important in the early stages of reflective journaling, is an essential tool in the practice of natural history (which is discussed in the subsequent *Natural History*

portion of this literature review) and consequently, in gaining ecological understanding. Sewall (2011) suggests that the (global) environmental crisis is ultimately a crisis of perception, and since powers of observation and perception are grown through experience and attention (energy flows where attention goes), it can be suggested that our shortened attention spans and reduction of time spent in nature are fundamentally linked to the environmental crisis. This theory is also exemplified in the term “nature-deficit disorder” which was coined by Richard Louv, the author of *Last Child in the Woods* (2008). Louv (2009) believes that less time spent in nature and less natural surroundings combined with prohibitive and restrictive attitudes/ laws regarding access to “the wilderness” by environmentalists and educators have many detrimental effects including, but not limited to, our connections with the natural world, how we view ourselves in relation to it, and ultimately, the health of the planet itself. Louv (2009) and many other environmental educators are calling for help and ideas in promoting an ethic of care and “growing” an environmentally responsible (and ecologically literate) society. Time spent in nature and reflective journaling are pedagogical practices that can serve as tools for countering nature deficit disorder and connecting individuals in a personal and meaningful way that can lead to greater understanding.

Orr (1992) and Thomashow (1995) propose that becoming ecologically literate and forming an ecological identity, can foster the sense of stewardship and biophilia (affinity for the living world [Wilson, 1984 as cited in Orr, 1992]) needed for an environmentally responsible and sustainable society. “Biophilia is believed to increase the ‘possibility of achieving individual meaning and personal fulfillment’ while furthering a ‘human ethic of care and conservation for nature, most specially the diversity for life’” (Kellert & Wilson,

1993, p. 21, as cited in Burgess & Mayer-Smith , 2011, p. 28). Mitchell Thomashow (2002) suggests that “a state of wonder is the basis for an ethic of care” (p.57). “Care” suggests emotional investment and personal involvement; a relationship. “Ecological identity is grounded in a person’s relationship with the natural world. It is a process of personal identification that causes individuals to consider how their actions, values and ideals are framed according to their perceptions of nature” (Thomashow, 1995, p. xiii). Being eco-literate is, according to Capra (1999), “understanding the basic principles of ecology and being able to embody them in the daily life of human communities” (p. 2). Both of these definitions include the proposition that ‘knowing’ nature involves knowing yourself (and your place within the world).

In his summation of the literature regarding ecological identity and self-realization, Learie (2009) identifies six points put forward by Naess (2008) as describing the connection between (and formation of) self-realization and ecological identity. The six points are:

1. We underestimate ourselves. We tend to confuse ourselves with a narrow ego-based concept.
2. Through a process of maturity, we ultimately begin to identify ourselves with the wider biotic community. We reach a maturity in all our relationships.
3. The traditional notion of maturity of self progresses through three stages of development, from ego to social self, and from social self to metaphysical self. Nature is largely absent from this progression of self. Our home and natural environment, including identification with the living world, is ignored. Our ecological self is in and of nature from our very origins. Our relationship with humans, human community and all living things is of vital importance.

4. Increased self-realization entails a widening and deepening of self that enhances the experience of living and the meaning of life.
5. Through the maturing process comes an increasing identification with others. As our concept of self deepens and widens we cannot help but see ourselves in others.
6. We face serious ecological challenges that threaten the planet. These threats violate our own self-interests and the self-interest of the entire biotic community. This threat diminishes the possibilities of a joyful existence for all. (Naess, 2008, as cited in Learie 2009, p. 34)

“Implicit in Naess’s proposition of self-realization is that an individual would have a basic understanding of ecological systems and a caring connection to the natural world. These two elements form the foundation of developing a personal ecological identity” (Learie, 2009, p.35). This research intends to demonstrate the efficacy of reflective time in nature spent thinking and writing, in fostering ecological awareness.

The literature review suggests concepts of identity growth and self-realization are closely entwined with the goals of an effective reflective journal writer. Learie’s (2009) above summation of Naess’ points is important as it makes a clear connection between self-realization and developing an ecological identity. As the reflector or reflective journal writer progresses to stages of deep reflection and comprehension of complex processes; begins to make his/her own meanings, and identify his/her place within the world; it can be argued that if his/her impetus’ for reflection and/or reflective writing is experience in nature, the writer’s realization of self would be in relation to nature and his identity would become one with ecology (with time and practice). I posit that practicing Natural History could be an effective

tool for the growth of an ecological identity, through meaningful reflection and reflective journaling.

NATURAL HISTORY

*The natural world demands a response that rises from
the wild unconscious depths of the human soul*

—Thomas Berry (1999, as cited in Tallmadge 2011)

This section will define natural history as well as highlight the connections between experience, reflection/reflective journaling and ecological identity, and how adding natural history can enhance interpretation as a pedagogical practice around self-awareness and ecological identity.

As previously cited, Thomashow (2002) wrote “a state of wonder is the basis for an ethic of care” (p.57). So how does one promote ‘wonder’ or meaningful affinity for the natural world (biophilia)? John Tallmadge (2011) suggests practicing the art and science of natural history. Tallmadge writes that the term “natural history” embodies the notion of a story (p.49), and since these stories require direct experience in nature, these experiences must be filtered through a human’s subjective consciousness (which encourages authentic experience and observation), which are then linked together to form a narrative, plot, and a storyteller (2011). This entire process speaks of personal /emotional involvement with nature (ecological identity, emotional leads to the pedagogical, synthesis of experiences to form a story [complex reflective processes and reorganization of meaning], and interdisciplinary thinking [ex. literature, anthropology, biology, history etc.]). “However, because the observer is always a person, never a ‘transparent eyeball,’ what he or she reports is also to some

degree a witness, that is, a story that embodies beliefs and values as well as facts”

(Tallmadge, 2011, p.51). This “story” process suggests that the writer/learner/researcher has become a creator and/or active participant in placing value on events, experience, processes, relationships etc, and synthesized them in a new order of new meaning. This evaluation and meaning making belies the consideration and abstract conceptualization of a deep/meaningful reflector/reflective journaler. On the basis of the synthesis of these skills and perceptions coming together in the form of “story telling” (natural history) in nature, it can be suggested that the learner has an appreciation/understanding of nature and of his/her place within it. A better understanding of natural history will help to reinforce the connections that exist between the different practices and processes that have been discussed in this literature review.

“Natural history is commonly understood as the practice of observing wild creatures in their native habitats, classifying them, and studying their origins, behaviour and interrelationships”(Tallmadge, 2011, p. 50) and can also be defined as “a field-based science employing descriptive and comparative methods for understanding and interpreting the biotic and abiotic components of the natural world, the relationships among them, and their evolution through time” (Gilligan 2009, p.25 as cited in Maguire 2013). Although there has been a revitalization of natural history and nature writing over the past three decades (Tallmadge, 2011), it is understood that natural history is no longer a daily practice of the average person, and that people in general have become alienated from the ecosystems that sustain them (Tallmadge,2011; Pyle, 1933; Kahn, 2002; Burgess & Mayer-Smith, 2011; Louv, 2005; Baldwin, 2013, personal communication; Sewall, 2011; Orians, 2013; Fleischner, 2011). But natural history and wonder are still alive, and can be seen in children

who seem particularly ‘tuned-in’ to nature and become so immersed and focused in natural settings that they are unaware of time passing (can be related to Csikszentmihalyi’s [1990] ‘flow state’, which has recently been proposed as a fundamental characteristic of direct experience) (Burgess & Mayer-Smith 2011).

“Natural history engenders humility, and open-mindedness..., and expands our sense of self into one of an ecological self (Naess 1987) and helps us to clarify ecological identity (Thomashow, 1996), by encouraging us to engage with nature- any place we can be in meaningful kinship with other species (Louv, 2011)” (as cited in Fleischner, 2011). However, biophilia (which fosters growth of an ecological identity through meaningful engagement with nature) must be nurtured if it is to flourish (Kellert, 2002; Konner, 2010 as cited in Orians, 2013). If growth of an ecological identity is one’s goal (which, in the case of this research, it is), then practicing the art of natural history may be another tool to employ to this end. Practicing natural history requires open-mindedness (Naess, 1987, as cited in Fleischner, 2011), the natural gift of perception and the ability to break free from perceptual habit (Sewall, 2011), attentiveness to the vivid world (Baldwin, 2013), careful observation (Fleischner, 2011), direct experience (Burgess & Mayer-Smith, 2011) and concern for fundamental spiritual and aesthetic truths (Hildebidle, 1983, as cited in Tallmadge 2011). Natural history is the process by which we come to know ourselves and fall in love with the world (Fleischner, 2011), and once the natural world becomes a space to which we belong (Leopold, 1949) ‘caring for nature’ becomes enlightened self-interest (Sewall, 2011). Ideally, one would begin to envision the deep connection we undeniably possesses with the natural world, and that by caring for it, one is in fact caring for one’s self. To surmise, natural history is not a simple and ordered science, but rather another involved process (much like

experiential learning and reflective journaling) with no set endpoint other than a realization of self and the connections we possess to the world around us. However, the effectiveness of natural history as a practice may be greatly enhanced when combined with lived experiences and a reflective writing practice.

Rather than a collection of observational notes, natural history (writing) is a process of observation (which is also inherent in the process of reflective journaling), classification, and story (Tallmadge, 2011) and requires a synthesis of hands-in-the-dirt sensations (direct experience; also inherent in the process of reflective journaling and experiential learning), simple and complex biological and ecological processes, animal interactions, holistic engagement of the senses (an important practice on the part of the active learner) and how we relate to the natural world (perception of self, ecological identity). This synthesis takes the form of a historical, anthropological, ecological and literary story, which belies natural history's interdisciplinary nature. The practitioner of natural history must therefore be versed in understanding and synthesizing complex processes and abstract conceptualizations, while also finding his/her own place within these processes/concepts/thoughts. Writing and storytelling can be seen as important pedagogical tools for this synthesizing process.

As this literature review has shown, reflective journaling and natural history can be used as effective tools in learning, and assist the learner in the formation of an ecological identity, which is essential for the natural history practitioner when relating his/her self to the natural world, and furthering his/her connection to it. The learner who learns holistically through experience, reflects on those experiences and reorganizes the meaning of them to deepen his/her understanding of the world will no doubt make the change from passive

observer, to active participant in meaning making and be able to continue man's immemorial tradition of natural history.

ANALYSIS INTRODUCTION

To reiterate, the objective of this research is to explore the efficacy of using reflective journaling (and natural history) as a pedagogical practice for developing an ecological identity. This portion of the journal analysis will be explored through a reflective lens, and will attempt to identify movement in myself towards deeper, process based reflective thinking, in addition to identity engagement/development. Development of my reflective ability may suggest heightened awareness of self, and in turn, awareness of his place within the world. Identifying one's self in relation to the surrounding world is crucial to the development of an ecological identity which demands that the learner be aware of his surroundings, how he affects the world around him, and where he has placed himself in relation to the natural world. I suggest that movement away from superficial reflection and content focused writing, towards process focused thinking/writing and deeper reflection is indicative of reflective growth and heightened awareness of self/self-realization. The analysis is presented in a chronological fashion, to better illuminate the process of my reflective journey.

METHODOLOGY

This research is in the style of autoethnography in which I combine personal experience and reflections in a qualitative analysis focusing on identity development and reflection. I feel that this research method best serves the personal nature of this research.

The two journals analyzed in this work span approximately eight months. Journal #1 was written in the summer of 2013, While Journal #2 was written between September 2013 and February 2014. Journal #1 was written with a focus on mapping my learning curve, and was to be included as primary research for my initial research project idea, which was mapping my personal learning curve and comparing it to known/widely accepted experiential learning models. Journal #2 was written with more of a focus on reflecting, natural history observations, and how I personally related to the natural world. I felt it was important to include the previous journal to potentially highlight a difference in content when a different focus is behind the writing. It is also important to include the first journal in this analysis to address the potential criticism that may suggest I purposely wrote these journals in a manner that would satisfy the objectives of this research. Because the first journal had a different focus and reason for writing it, the act of writing it is un-tethered to this research's objectives, therefore providing a clearer example of naturally occurring reflection. In addition these differences between Journal#1 and Journal #2, I believe it is significant to note the differing writing schedules I employed in writing them. For Journal #1, I attempted to write an entry for each day worked, and made up for any missed entries by writing two the following day. I can recall that this schedule caused feelings of not wanting to write on certain days, or feeling like I was writing against my will. It is possible that on days like these, my writing became less meaningful, forced, and content heavy; just to get the entry over with. For Journal #2, I adopted a more natural writing schedule; writing when the feeling came to me or when I felt like it had been too long since my last entry. I believe the change in writing schedule changed upon reflection on my disdain for daily entries in the previous journal, and upon my new understanding that writing because I felt I *should*, may

have a negative impact on the quality of entries. I feel that this natural writing schedule made for more meaningful entries, but, as it is impossible to recall my feelings while writing each entry, these differing writing schedules can serve simply as variables that add depth to the lens through which the analysis of these journals can be viewed.

The methodology for analyzing these journals involved an extensive colour coding scheme using two different lenses. First, I read through both journals for a broad understanding of the changes occurring in my life during the time these journals were written. Using guidance from Hubbs and Brand (2005), I identified statements in my journals that could be considered content statements, process statements, superficial reflections and deeper complex reflections. I then chronologically colour coded both journals, using different colours for content statements and process statements and made notes on the depth of reflection embedded in each statement and/or entry (based on my literature review). In this way, I was able to easily identify the depth and orientation (whether it was content or process focused) of each article. In writing the analysis of these journals, I was able to use my colour coding and notation scheme to identify changes in the amount of content or process based focus in each entry and the general depth of reflection.

The first portion of this analysis, is analyzed through a reflective lens. I attempt to identify movement towards inward (process) focused thinking and deeper reflection within the writing (and therefore, within myself).

In the second portion of this journal analysis, I attempt to identify the existence and/or development of an ecological identity. I read through the journals again, line by line, highlighting and noting representations of Kellert's (2002) nine nature values in my own

writing, as well as representations of Naess' six points that demonstrate self-realization and ecological identity. As I completed the second portion of this journal analysis, I was able to use my notes and highlights in each entry to identify different valuations of nature, and excerpts I believed to be indicative of the existence/development of an ecological identity (based on Naess' [2008] six points and my previous literature review). These methods may prove effective in identifying the development of an ecological identity within myself, as well the development of a meaningful relationship with /understanding of, the natural world.

I believe the journal analysis methods I have used have brought me full circle from writer to observer to analyst, making my understanding of this research both active and personal.

ANALYSIS: REFLECTION

JOURNAL #1

I will begin this analysis with excerpts from my journal to demonstrate what I am classifying as content statements, process statements, superficial reflections and deep reflections.

Content statement (outward focused): *"I met _____, "the owner" yesterday who gave me the run down on the crew and told me what equipment I would be using."*

Process statement (inward focused): *"I realized today that I'm not working as hard now, as I was when I started. I imagine it is because I'm not trying as hard to prove myself, because I feel that I have been accepted."*

Superficial reflection: *"I think it may be time to move on and learn some more things for myself."*

Critical reflection: *"...I think it was anger from feeling like I am falling behind in my workload, which up to that point, I had felt like I was on top of. I think the anger came from realizing I had been kidding myself, and knew it. I feel the anger also came from stress, and from feeling fine, to overwhelmed in a few moments. The meeting made me doubt myself, and my abilities.", "The fact that my stress level, and feeling of being overwhelmed sky-rocketed so quickly, makes me think there is an imbalance elsewhere in my life"*

What is immediately noticeable upon examination of my first journal is that the initial entries are almost entirely content focused, with very little reflection included. Job details, names, equipment, and acquired skills dominate. It is apparent that observation is at work and that I am taking in as much information as possible.

"...there was no way I could prepare the exact muscles I would be engaging...", "I met ____ who gave me the run down on the crew...", "____ is covered in tattoos, swears a lot...", "...basic hand signals while wearing ear protection."(p.14-15, Shortt 2013)

"I dragged branches from the yard to the chipper, and then loaded logs into wheel barrows and carted them to the curb." (p.16, Shortt, 2014)

These statements seem to be congruent with Wallace & Oliver (2003) who report that reflective journal writers generally begin from an observing/reporting standpoint. One of the generally accepted antecedents for reflection is the individual's readiness and willingness to engage in the reflective process (Rogers, 2001), which at the time of writing this first journal, neither the focus nor objective was reflection.

The first real process statements, although not particularly deep or profound, are initiated by a feeling of being judged and or being deemed incapable. The entry as a whole is almost entirely content focused, except for the first process statement at the beginning of the entry, and the second statement at the very end.

“I feel like I might be expected to prove my competence with a chainsaw today, but we’ll see”, “ Supervisor made a joke about me being too tired to continue, on the last job, to the customer, and even though it was mostly true, I still didn’t appreciate it as I’m working as hard as I can” (p. 18-19, Shortt 2013)

These are inward (process) and self-aware statements, although in terms of reflection, they are still superficial. It may be significant to note that when my ego or pride becomes involved in a situation, process focused thinking is naturally initiated. This may support the theory that the emotional leads to the pedagogical (Shoffner, 2009; Burgess & Mayer-Smith 2011; Hubbs & Brand, 2005).

At the beginning of the second week at this job, it is clear through my writing that I am slightly more confident in my abilities and begin to reflect on my learning abilities, as well as my understandings of the coworkers:

“...team seems more comfortable with me...”, “I realized today that visual learning is probably my strongest method of learning, but that my auditory learning skills seem to have improved, when I compare to past experiences...”, “_____ enjoys talking about his kids...”, “...branch fell on _____’s foot in the crotch of the big oak. He was immediately angry, but I think from fear.” (p.22-23, Shortt, 2013).

These examples exhibit the beginnings of process focused thinking and (superficial) reflection. By reflecting on an experience, instead of simply recording observations of it (ex. *He was immediately angry, but I think from fear*), I am beginning to try and add my understanding/meaning to experiences.

By the end of the second week of this job, I notice an influx of process statements and (relatively superficial) reflection in my journal writing. *“Last night while in bed, I was thinking that having the ability to learn, let alone the time, money and motivation, is an incredible gift. And that I’m lucky to have all those things, and should be more excited to learn about anything I can. So I tried to be more eager today, ask more questions, and watch more closely”* (p.26-27, Shortt 2013) . This particular entry demonstrates active participation as a learner, after reflection on, and reorganization of, experience. It is apparent that reflection was useful in evaluating my experiences, and reorganizing the meaning of them to change and improve upon future experiences.

Approximately two weeks later there is an entry fuelled by apparent disdain for the way I have been treated by my supervisor, which provides impetus for the first process focused, deeper reflection in this journal.

“I am learning about the difficulties of working with strong personalities, which I suppose is beneficial experience. I am also spending lots of time thinking about the price tag of happiness and whether the outcome of experience with this job outweighs the negative environment and my dissatisfaction with expected pay and the bosses apparent ignorance to the fact” (p.42-43, Shortt 2013).

This is not what I would consider a deeply critical and processed focused reflection, but it is indicative of movement away from simple observation and reporting. The example above is also relatable to one of the previous entries discussed in this analysis, in that as my pride/ego becomes involved, the initiation of process focused thinking upon reflection occurs. In the following two weeks of entries, there is almost a strict adherence to content focused statements, and little to no process or reflective entries.

“Today was very windy and cold...”, “_____ is usually too busy to notice what work I am doing...” (p.44-45, Shortt, 2013), “I believe I have shin splints in my right leg...” “...when I wake up my right arm is so numb that it hurts...”(p.46-47, Shortt 2013)

These entries are not especially positive, and do not engage emotions/pride/imagination within myself, which seems to result in these entries having a content and observing/reporting focus.

In the remaining week of this job (before I left and continued this line of work on my own) there is an obvious escalation of emotion and wavering belief in a future at this particular company. These feelings most likely contribute to an influx in process statements in the remaining entries and a comparative reduction in content statements. The few reflections in the last week of entries are mostly superficially reflective and process-oriented, and focus on my exasperation in regards to pleasing my supervisor, and what I’d learned about motivating others. *“I will have to work really hard so he doesn’t replace me...”, “I’ve been trying to kill him with kindness and stay out of his way...”, “I have been thinking about if I have stopped to take pride in what I have learned or accomplished so far...”, “...try and focus on all the positive experiences in this job, rather than what I have to prove...”, “...it*

may be time to move on and learn some more things for myself...”, “...I don’t believe yelling, name calling, and constant berating is the most effective way of conveying or transferring knowledge...”(p.49-63, Shortt 2013)

Although relatively superficial, these statements confirm that when ego and/or pride become involved, process focused thinking tends to flow naturally from the pen. This seems to be an ongoing trend throughout this journal. The above examples demonstrate a level of awareness of self, and how the author reacts to various experiences and/or, processes them. I suggest that continued practice of reflection may be useful in learning to be aware in the moment.

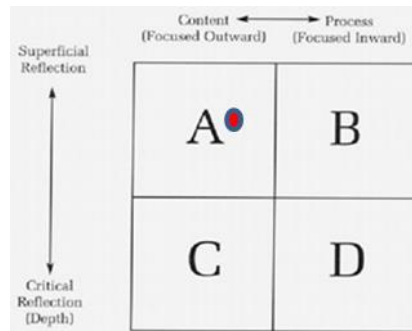
DISCUSSION OF JOURNAL #1

The analysis of this first journal has highlighted a number of interesting points that are significant to this research. To begin, a lack of willingness or readiness to engage in reflection (Rogers, 2001), and I believe this hesitancy resulted in an overall lack of deep or meaningful (complex, critical) reflection (which is understandable as the impetus for writing this journal was not geared towards reflection). This journal also confirms Rogers’ (2001) other antecedent for reflection; “an event or situation beyond the individual’s typical experience must occur if the reflective process is to be triggered” (Rogers 2001), as, in the majority of instances of process based thinking and superficial reflection, and few moments of deeper reflection, some event or situation beyond my typical experience occurred to trigger it. These situations most often involved interactions with another person, which, I suggest, delineates the importance I place on other people in my learning and reflective process. It appears that I also succumbed to one of the cautions of journaling outlined by Hubbs & Brand, 2005; Wallace & Oliver, 2003; and Kerka 2002, in which I began to simply

use the journal as a superficial diary or record of events, as evidenced by the overall prevalence of content based statements. It will be interesting in the analysis of the second journal to see if the trend of process statements being initiated by interactions with personal pride or ego continues, as well as if more frequent occurrences of deeper reflection and process focused thinking occur.

This first journal, to reiterate, was not focused on reflection, but rather my learning experiences at a new job (which was outside of my typical experience). Using my colour coding scheme, notes, and the Hubbs and Brand(2005) reflective matrix as a guide I have determined that content statements were present in larger quantities and higher frequency than process statements. Out of 24 separate entries, 18 were heavily content focused. 4 entries out of 24 had a balance of content and process statements, while 2 entries out of 24 were heavily process focused. A review of my notes for each entry tells me that the level of reflection (when reflection was present at all) was superficial in general (as not a single complex process statement was identified throughout this first journal). Despite being outnumbered by content statements/observations, it is significant to this research to note that process statements and reflections became more frequent in the latter half of the journal (before the half way point in the journal, 2/12 entries had a content/process balance while after entry 12, 2/12 entries had a content/process balance, and 2/12 entries had a process focus). I believe this is indicative of at least some movement away from content focused thinking/writing (which is significant to this research's objectives) and a relative increase in frequency of reflection (as made apparent by the increased prevalence and frequency of process statements/thinking in the latter half of the journal).

If I had to place myself on the reflective matrix at the end of this first journal, I would place myself here:



JOURNAL #2

This second journal was written with a focus on reflection, the nature of my research, and my musings about nature (which differs from the previous journals focus which was to map my learning ability of the course of a new job). I will analyze Journal #2 in the same manner as the first journal; which is through a reflective lens using my colour coding scheme, notes, and Hubbs & Brand's (2005) reflective matrix to identify content/process statements and differing levels of reflection.

This journal begins with strong emotions, which characteristically have been followed by relatively deeper reflection, as was shown in the previous journal. It is satisfying to see complex (critical), and process focused reflection at the beginning of this journal, and suggests to me, improvement of the ability to meaningfully reflect. There was not a single example of what I would consider a complex process reflection in the previous journal, so the following entry may be considered a personal breakthrough in reflective thinking/journaling.

"...I think it was anger from feeling like I am falling behind in my workload, which up to that point, I had felt like I was on top of. I think the anger came from realizing I had been

kidding myself, and knew it. I feel the anger also came from stress, and from feeling fine, to overwhelmed in a few moments. The meeting made me doubt myself, and my abilities.”, “The fact that my stress level, and feeling of being overwhelmed sky-rocketed so quickly, makes me think there is an imbalance elsewhere in my life.” (p.1, Shortt, 2014)

The remainder of the above entry is a content focused, proposed solution to mitigating my stress level. In this particular entry, inward focused and deep reflection was useful for identifying and mulling over a problem, while content focused thinking was useful in creating solutions to the problem. The author is engaging his identity and questioning his habitual reactions to stressful situations. By critically reflecting on this experience, the author was able to reorganize the meaning of the experience and consider new ways to understand his habitual stress reaction. Reflective journaling can keep us from becoming complacent in our practices, help us view situations from different angles and avoid falling into our habitual ways of thinking (Kremenitzer, 2005; Clark, 2009; Mezirow, 1998, as cited in Hubbs & Brand, 2005). The previous excerpt confirms this theory.

The following two entries in the journal are mostly content focused, and deal with research as well as observations of nature. Below are some representative excerpts from those two entries:

“Reading about natural history, and reflective journaling has been very interesting so far...”, *“...thinking and observing and playing are proven contributors to identity forming”*, *“...The leaves left the apricot tree (in majority) this past weekend...”*(p.3-6, Shortt, 2014)

As can be seen in the previous excerpts, content focused writing and superficial reflection seem to dominate when speaking of research/academia or facts and straightforward

observations. In the analysis of the previous journal, the beginning of a new job elicited mostly content focused writing as the author listed job details and observations of coworkers and the job environment. It seems as though if I am writing about impersonal topics (ie. research, job details), that content focused writing dominates.

The following excerpt is the strongest example of deeper reflection and process focused writing in the subsequent five journal entries, although all six entries exhibit a stronger trend towards inward focused thinking and deeper reflection (made apparent by colour coding), and outnumber/outweigh content statements/superficial reflections.

“I am seeing a connection form between my time spent in the Ottawa valley, and my time in Kamloops. Knowledge of the local flora, as well as some natural history, makes me feel far more connected to where I am, than anywhere else I have been (apart from Oil Springs [family home]). I realize I have spent more time in Kamloops and the Ottawa valley than most other places I have been. But it feels different. It feels better. I feel less like a visitor and observer, and more like an... active participant I suppose. A member even, to a sort of club. I don’t know much of the history of Kamloops and don’t feel so much a connection to the ‘idea’ of or city of Kamloops, as I do the land in it and around it. The boundaries of a city could limit a feeling of belonging I suppose, but knowing topography, and common plant species of an area, and that this particular BEC zone with its diffuse boundaries stretches past city limits, allows for a broader imagining of knowing, belonging, comfort and to an extent, my own place within this land. The plants and land features have been here longer than people have, so to know the natural history, is to know this land.” (p.11-13, Shortt, 2014)

It is significant to this research to note how the above entry demonstrates analysis and synthesis of ideas, which, according to Wallace & Oliver (2003), shows movement towards the ‘end goal’ of the effective reflective writer, which is placing value on events and experiences. Placing value on experiences suggests that the author is engaging his own identity in determining his value of experiences.

A final entry (p.24-25, Shortt, 2014, see appendix) before the 2013/14 Christmas break, denotes the halfway point of this journal, and is almost entirely process focused and deeply reflective.

“I still feel as though I’m not hitting the deeper level of reflection that I want. I feel as though part of it comes from the perception of an audience. Like the way some of _____’s work/writing is displayed in his thesis is throwing me off, and feel like I have to write FOR someone. I suppose I should just work at putting that out of mind. I can see how this feeling can really alter my ability to write and reflect. I saw it as a caution in the literature, but it is really ringing true now.”(p.23,Shortt, 2014)

A heightened awareness of self is apparent in this excerpt and is indicative of deeper reflection. As mentioned earlier in this analysis; with practice, I hope to be able to engage this awareness ‘in the moment’ (of experience or while writing another entry perhaps).

It is evident to me, at this point in the analysis, that a change in the overall focus of writing (reflection), in comparison to the previous journal; results in the increased prevalence of process thinking and deeper reflection. It would appear that energy flows where attention goes, and the willingness to engage in reflective thought, results in more plentiful, and meaningful reflection.

The following excerpt takes place during a visit to my family home during Christmas break and although mostly content focused and observatory (which seems to be a trend upon arrival or exploration of a new place/ new experience/ place I haven't seen in a long time), the entry (and a few subsequent entries) seem to be taking on a sort of story-like quality, where details and ideas are interwoven into a first person narrative: *"I'm proud and thankful that this 20 foot ash is clinging on, and somehow deterring the beetles, ...probably through pure charm."* *"All of the oaks around here are looking pretty old and gnarly, just like the dog"*, *"These boundaries are relatively far (and not uniform) from the property lines, and come from exploring"*, *"I'm guessing it is about negative 10 degrees outside judging by the speed at which my breath clings desperately to my facial hair, before freezing solid."* (p.26-29, Shortt, 2014)

These excerpts are significant in that the author has taken a more active role in his writing, by creatively narrating experiences and adding more of his own meaning to these experiences. Instead of simply reflecting on and recording experiences, creativity suggests heightened participation by the author. I suggest that the lean towards a creative (non-fiction) style of writing in these entries demonstrates the author adding himself into the subject of the writing, thereby adding his own meaning to the mix. This personal involvement allows the author to grow and engage their individual voice (Lambirth & Goouch, 2006), and gives the writer opportunities to make sense of the world and how they operate within it (Boud, 2001). As discussed in the literature review, potentially the most important benefit of reflective journaling and meaningful reflection is the learner's participation in meaning making and identity formation/growth (Clark, 2009; Kerka, 2002; Boud, 2001; Hughes et al. 1997 as cited in Hampton & Morrow, 2003; Lambirth & Goouch, 2006). As I am going through these

entries as an observer, it is heartening to see the literary engagement with identity and the development of voice and self-realization.

Upon arrival back in Kamloops for the second semester, the two initial entries are mostly focused on my research and school work, which results in both entries being comprised of almost entirely content statements (which is congruent with previous findings in this analysis so far). Interestingly, the third entry has a near balance of process and content statements, and discusses my research in a reflective manner. Deeper reflection is also apparent in the following excerpts:

“One of the papers I read regarding creativity suggested that creativity is not so simple as being ‘off the wall’ which I think is important to note as I believe I have confused the two as being the same in the past. I can attribute many of my memories of ‘being creative’ to simply being ‘off the wall’ which at first, put a bit of a damper on my spirit. Have I ever been creative? Am I creative?”, “Meaningful reflection at the complex level suggests that the writer is proficient at making abstract conceptualizations and synthesizing ideas (or rather, connections between ideas) to, in a way, create something new. If this is true, it could mean that creativity is far more prevalent in our lives, our thinking, than I suppose I would immediately assume.”(p.38-39, Shortt, 2014)

It is significant that at this point in the journal, process-based and reflective thinking are being used when writing about this research and academia, and that the author is engaging his own identity in the reflection. Near the beginning of this journal, research or academia thinking was written about in an almost entirely content focused (and superficially reflective) manner: *“Reading about Natural history and reflective journaling has been very interesting*

so far, in the connections that are arising between the two.”(p.3,Shortt, 2014), “After writing my last entry, I realized I need to make time” (p.18, 2014), “This will also make the thesis an even more subjective endeavor, which holds interesting prospects in the world of academic research” (p.21, Shortt, 2014).

Therefore, it is important to note that with time and attention, the practice of reflection can grow, improve, and be used in more diverse ways.

In the remaining entries of the journal (p.41-50) there is a near balance between content and process statements (using the colour coding scheme as a guide) with the lean in favour of process focus, although the overall level of reflection is closer to “deep” than superficial.

“And in our search for what is real and meaningful, I find that nature is one of the few truths we have available to us, that people often do not seek out”

“I imagine this goes in hand with the ease at which ‘modern’ man avoids responsibility or attempts to find solace/distraction in anything BUT things that are true. I know I enjoy distraction and often avoid opportunities/situations in which I may find myself alone and quiet, where I might be cornered with my own thoughts” (p.44, Shortt, 2014)

“A feeling in my belly came to my attention, one which is usually reserved for visiting home, or nostalgia. This was really the first time that I had noticed that a collection of species, familiar species, reminded me of home!” (p.47, Shortt, 2014)

What is interesting in these remaining entries, is that the content focused writing has a generally deeper level of reflection attached to it, than did the content writing at the beginning of this journal and especially in the previous journal. Process writing has become

more frequent and is sustained for longer periods (according to colour coding scheme) in the majority of this second journal, especially in the latter half. It is apparent that I am still searching for a balance in my reflective writing but that the general depth and frequency of reflection has increased, which becomes particularly noticeable when compared to the first journal.

In one of the last entries on p.46 (Shortt, 2014), reflection is apparent within the first couple sentences. I believe the following entry, one of the last in the journal, is an excellent example of a synthesis of the ideas I have been mulling over during this research project, and is representative of the general movement to a deeper, critical, level of reflection and inward (process) oriented thinking.

“People see themselves as separate from ecology, if they see themselves at all. Economics do not replace ecology, and they do not move independently of ecology. As Lyn said, massive feed lots make sense economically, perfect sense. But ecologically, they are absurd. Over-fertilization, trampling, unsustainable, poisoning the earth. Natural history, and even reflective journaling with a nature inclined mind, is good for helping us realize that we are not separate from ecology. Not in the slightest. As gravity is law, so is our contact with ground, land, air and water. This is the essence of an ecological identity. Creative writing literature holds that minds are constantly scanning and groping and creating metaphors to make sense of the chaos that is our world. These metaphors are meant to simplify an idea, a view, a concept, so that we may accept it into our mental map of understanding this, space. Lyn recently spoke with me and raised the idea that ecology, and natural history have a way of raising more questions, the closer we look. The metaphors of wild things and beautifully complex, yet simple natural processes force us to relate to a more-than-human world, a

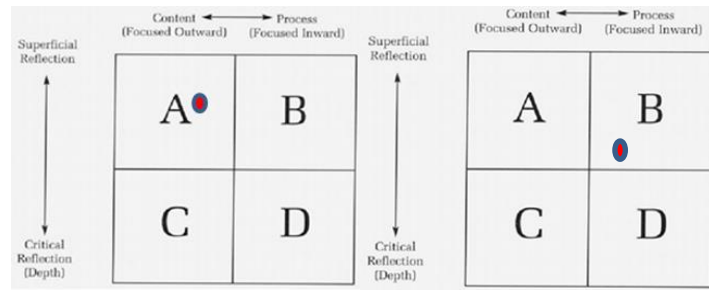
world much bigger than ourselves. These metaphors are opposite in a way from those previously mentioned in creative writing. They do not simplify or narrow to a point so that we may accept them and consume them and move on to a new...thing. They open our eyes to wonder and questions and draw us into the ever expanding and wonderful processes of the natural world. It is maybe this culture of quick answers, quick learning and consumption, that inherently discourages us from participating in purposeful, lifelong learning, and the never ending well of wonder that exists in the natural world. Not OUR natural world to consume and inventory, but ours to re-invigor and nurture a relationship with. This relationship must be a personal one to begin with, before we can discuss and nurture it together. This highlights the importance of an ecological identity, and personal reflection on ones relation to the natural world. ” (p.41-43, Shortt, 2014)

This excerpt is representative of many important concepts that are significant to this research. It is a process focused creative narrative, combining evident critical reflection and creative meaning making put forth by the author. The entry as a whole provides a personal look at the processing of an idea into a reorganization of meaning, put forth by the author, thereby asserting his value of the idea. The author has clearly moved past his initial role as a passive observer, to an active participant in reflection and meaning making (Clark, 2009; Kerka, 2002; Boud, 2001; Hughes et al. 1997 as cited in Hampton & Morrow, 2003; Lambirth & Goouch, 2006). These are the goals of an effective reflector and result in the integration of new understanding (Priest & Gass, 1997; Walsh & Golins 1967, Bennion & Olsen, 2002, Gass, Gillis & Russel, 2012). Interestingly, upon re-reading the previous excerpt, it is evident that the author’s voice has become more assertive and individualized (compared to the first journal which was mostly content focused, observatory, and superficially reflective). As

discussed in the literature review, reflection provides opportunities for recognition of individual voice and identity (Lambirth & Gooch, 2006), and gives the writer opportunities to make sense of the world and how they operate within it (Boud, 2001). In comparing differences in the author's 'voice' between the first and second journal, it may be suggested that development of voice is reflective of development of (individual) identity.

CONCLUSIONS

In regards to the objective of this analysis, which was to identify general movement away from superficial reflection and outward focused content statements, and towards critical reflection and inward focused complex process statements (as outlined by the Hubbs & Brand 2005 reflective matrix) it is my position that after a thorough analysis of two separate personal journals, using my outlined methodology, that general movement towards deep reflection and inward (process) focused thinking can be suggested. Journal #2 had 7/25 heavily content focused entries, 7/25 content and process balanced entries, and 11/25 heavily process focused entries, which is a significant increase in process thinking/writing when compared to Journal #1. Numerous complex reflections, and generally deeper reflection overall in Journal #2 (when compared to Journal #1) indicates definitive movement away from superficial reflection. Below I have provided visual representations of where I believe I stood in my reflective (writing) ability after the first journal (left) compared to where I believe I stand after analyzing the second journal (right).



The visual representations above are subjective and based solely on my own critical assessment of my writing abilities in general. The location points I have placed on both graphs are representations of the overall reflective ability that I believe either journal demonstrates.

What I have also gleaned from this analysis, is the confirmation that direct experience can be said to be a requirement of meaningful reflection. Whether taking a walk through Peterson creek, talking with a professor, or cutting down a tree, I have found that direct experience elicits more meaningful reflections as compared to self-confirming loops of ‘groundless’ reflection. Before this project, I often thought about reflection and journaling as a solitary and personally focused practice. Subsequent to this analysis, I realize how important other people are to my reflective growth, as demonstrated by the initiation of process statements and reflective writing after engagement with job supervisors/coworkers (first journal) or research supervisors/professors (second journal). I cannot say this is universal to journal writers, but this analysis has shown that conversations and experiences with others, often elicit more meaningful reflection in my journal. Similarly, stronger emotions have shown to be an important part of my reflective growth. This aligns with the theory that the emotional leads to the pedagogical (Shoffner, 2009; Burgess & Mayer-Smith 2011; Hubbs & Brand, 2005). Numerous instances throughout the journals where I directly

interacted with and questioned my own reactions and behaviours exhibit identity engagement and demonstrate the theory that reflection empowers individuals to see through their habitual way of experiencing everyday life (Redmond, 2004), which allows for reconstruction and reorganization of experience which adds to the meaning of experience (Rodgers, 2002):

“I feel the anger also came from stress, and from feeling fine, to overwhelmed in a few moments. The meeting made me doubt myself, and my abilities.”, “The fact that my stress level, and feeling of being overwhelmed sky-rocketed so quickly, makes me think there is an imbalance elsewhere in my life” (p.1, Shortt, 2014)

“It was as if having the embodiment of different disciplines in the conversation forced me to better synthesize my interdisciplinary research...” (p.20, Shortt, 2014)

“I can attribute many of my memories of ‘being creative’ to simply being ‘off the wall’, which at first, put a bit of a damper on my spirit. Have I ever been creative?”(p.38,

Shortt,2014) Examples like the ones above, also exhibits convergence of emotion and cognition which, as discussed in the literature review, suggests deeper complex reflection and self-realization. This is a life-changing benefit of reflective journaling that really hit home during this research project. I believe these examples suggest a general movement towards deeper reflection and inward focused thinking/writing as my writing practice developed. It is my belief that, comparably to the growth of reflective thinking/writing via practice exhibited in this research, identity engagement throughout this project can also be suggested through aware engagement, reorganization of experience, and development of my ‘voice’, which becomes more frequent through the journals upon analysis. This is significant to the research as, for this author; it has confirmed the use of reflective journaling as an effective tool for

promoting reflective and identity growth/development. The positive identification of reflective and identity growth via reflective journaling bodes well for the possibility of development of an ecological identity. Reflective journaling has been shown to engage my personal identity, which I believe is a requirement in developing an ecological identity. As I learn to engage my personal identity, and the kinds of experiences that help or hinder its growth, I can begin to surround myself in engaging ecological experiences and thoughts to incorporate ecology in my identity development. By reflecting on experiences I have had or decisions I have made, I may be able to identify ecological import and relations that I had not previously considered, which adds permanency and new understanding to past experiences, especially when written down. These ideas inform the subsequent analysis of Journal #1 and Journal #2, through an ecological lens.

ANALYSIS: ECOLOGICAL IDENTITY

In this portion of the journal analysis, I will attempt to identify the existence and/or development of an ecological identity. The same two journals were used as in the previous analysis; however in this analysis I compared journal entries relative to Kellert's (2002) nine nature values in my own writing, as well as representations of Naess' (2008) six points that demonstrate self-realization and ecological identity. Using this method, I was able to use my notes and highlights in each entry to identify different valuing of nature and excerpts I believed to be indicative of the existence/development of an ecological identity. These methods were used to identify change and/or development my ecological identity that may have occurred through reflective journaling and how I relate myself to the surrounding natural world. Of course, the underlying assumption is that an increase or decrease and/or a shift in which nature values are evident in my journal entries reflect a change in my

appreciation/valuing of nature. As discussed in the first half of this analysis and the literature review, placing value delineates my attempt at meaning making, thereby locating myself in relation to these meanings. Placing value is illustrative of the involvement and the meaningful relationship I must have with the subject of value placement. As my relationship with the natural world increases in depth and value (evident in this analyses by identifying changes in nature values and evidence of Naess [2008] points), the existence of an ecological identity and its development can be suggested.

Furthermore, if I can (significantly) identify representations of Naess' (2008) points regarding the formation/development of self-realization and ecological identity within my writing, I believe that this suggests identity engagement/awareness and ecological identity development has occurred. Prevalence of representations of Naess' (2008) points within my writing will be noted as well as which points are evident.

Kellert's (2002) nine nature values are as follows:

1. Scientific-Ecological: having or seeking knowledge and understanding of nature
2. Naturalistic: a focus on exploration and discovery of nature
3. Symbolic: nature used as a source of language and imagination
4. Aesthetic: physical attraction and appeal of nature
5. Humanistic: emotional bonding with nature
6. Negativistic: aversion to nature
7. Utilitarian: nature seen as a source of material and/or physical reward

8. Moralistic: value is expressed when people display an ethical and spiritual connection to nature

9. Dominionistic: mastery and control of nature (Kellert, 2002, as cited in Burgess and Mayer-Smith, 2011)

Kellert's (2002) nature values will help to illuminate the author's understanding/relationship/connection of/with the natural world. These values form the basic structure of the human relationship with the natural world. Below are Naess' (2008) points that describe the connection between (and formation of) self-realization and ecological identity.

The six points are as follows:

1. We underestimate ourselves. We tend to confuse ourselves with a narrow ego-based concept.
2. Through a process of maturity, we ultimately begin to identify ourselves with the wider biotic community. We reach a maturity in all our relationships.
3. The traditional notion of maturity of self progresses through three stages of development, from ego to social self, and from social self to metaphysical self. Nature is largely absent from this progression of self. Our home and natural environment, including identification with the living world, is ignored. Our ecological self is in and of nature from our very origins. Our relationship with humans, human community and all living things is of vital importance.

4. Increased self-realization entails a widening and deepening of self that enhances the experience of living and the meaning of life.
5. Through the maturing process comes an increasing identification with others. As our concept of self deepens and widens we cannot help but see ourselves in others.
6. We face serious ecological challenges that threaten the planet. These threats violate our own self-interests and the self-interest of the entire biotic community. This threat diminishes the possibilities of a joyful existence for all. (Naess, 2008, as cited in Learie 2009, p. 34)

As discussed in this research's literature review, "implicit in Naess' six points is that the individual would have a basic understanding of ecological systems and a caring connection to the natural world. These two elements form the foundation of developing a personal ecological identity" (Learie, 2009, p.35). Arguably, if I can identify some of these points within my own writing, then I believe this will suggest the existence of an ecological identity and/or development of one.

These journals will be analyzed through an ecological lens with the intent of identifying the authors understanding of, and relationship with, the natural world for the purpose of exploring the reflective journal as an effective pedagogical tool for developing an ecological identity.

JOURNAL #1

To reiterate, Journal #1 covers a period of time of which I worked at a residential tree service company during the summer of 2013. This journal will be analyzed again; this time, through an ecological lens, as I attempt to locate how I value nature, and how I relate myself to it.

Interestingly, in the first few pages of the journal, if trees or nature are mentioned at all, it is in relation to the job, how many trees cut or pruned, how the weather affected the job etc., which I have deemed to be demonstrative of utilitarian nature value (nature seen as a source of material).

“I dragged branches from the yard to the chipper, and then loaded logs into wheel barrows and carted them out to the curb” (p.16, Shortt, 2013)

“...included 2 tree removals in the front yard, 3 removals in the backyard and one trim job” (p.18, Shortt, 2013)

“...2 large trunks that needed to be cut up and dragged uphill and taken away (poplar, willow). There was also a tree removal in the front yard” (p.21, Shortt, 2013)

Although tree species are mentioned, which may be indicative of scientific-ecological value of nature (having or seeking knowledge and understanding of nature), I believe the previous excerpts are mainly representative of utilitarian values. As this company is a residential tree service company that operates under daily quotas of production, it is reasonable to suggest that the collective view of nature by this workforce is utilitarian, and that I am focusing on this value alone as I try to adopt the habits and attitudes of the other workers.

In my second week at this job, my level of comfort with co-workers and confidence in my ability seemed to increase. Evidently, through this higher level of comfort/confidence, comes the willingness to look up from what I’m doing for at least a moment, to notice a customer’s meticulously pruned and maintained apple orchard, full of short, umbrella like apple trees:

“..had an interesting apple orchard with 3 foot trees that were very short, but spread out like big umbrellas” (p.22-23, Shortt, 2013).

Although in this entry I still discuss trees and their removal in a utilitarian fashion (similar to previous examples) I suggest that noticing the apple orchard, and taking the time to record it in my journal, demonstrates an aesthetic valuing of nature (physical attraction and appeal of nature).

In the following entry, I notice *“an 80’ tree had rocks in the middle of its trunk, the tree was pretty rotten, and had ants and grubs in it” (pg.25, Shortt 2013)*, which again based on the fact that I took the time to write about it later that night, and on the idea that my objective for this journal was a subjective data collection of my learning process, I believe highlights an inherent naturalistic valuing of nature (discovery of nature).

In the following two weeks of entries, when nature (weather or trees in this case) is mentioned, it is referred to in a utilitarian fashion, although I am starting to regularly include tree species when writing , which may suggest scientific-ecological nature values (having or seeking knowledge and understanding of nature).

“_____ climbed and took down a spruce today” (p.27, Shortt, 2013)

“The first job was 2 locus tree trimmings” (p.28, Shortt, 2013)

“Today we went to 3 jobs which were all removals, 12 trees in total” (p.30, Shortt, 2013)

“First day working while raining. It was only spitting a bit. Today was an easy day, mostly picking up mulch and brush piles” (p.32, Shortt, 2013)

“Hot again today, almost 30” (p.34, Shortt, 2013)

“The last job consisted of _____ topping a tree, a very large white pine” (p.37, Shortt, 2013)

“I also removed an entire double-stem, 40ft birch tree...” (p.40, Shortt, 2013)

The previous excerpts are representative of the entries they are from, which all seem to value nature in a utilitarian fashion. Again, it is possible that the utilitarian nature of the job is influencing the way I interact and value the parts of nature I am engaging. The almost strict utilitarian valuing of nature present in these journal entries are evident of fairly narrow view of the natural world surrounding the author. Most likely, I was consumed by the production focus of the work and by my drive to be seen as competent by my coworkers (which can be seen in the reflection portion of this analysis). I believe this is representative of Naess's(2008) first point regarding self-realization and ecological identity: We underestimate ourselves. We tend to confuse ourselves with a narrow ego-based concept.

In the following two weeks of entries, which takes us to the end of this first journal, numerous instances of appreciation of nature highlighting scientific-ecological, naturalistic (exploration and discovery of nature), aesthetic (physical attraction and appeal of nature), and symbolic (source of imagination) various nature values begin to appear:

“It was nice talking trees with _____, he really knows his stuff. One tree we took down had some disease that turned the inside of the tree a greenish colour. Verticillium something.”

(p.47, Shortt, 2013)(scientific-ecological, naturalistic)

“taking down a huge Manitoba maple. I didn't know they could even get that big!” (p.50, Shortt, 2013) (symbolic, naturalistic)

“This silver maple was huge. I marvel at the fact that trees can get so big inside the city”

(p.52, Shortt, 2013) (symbolic, naturalistic)

“I was thinking I should start drawing or photographing some of the larger, properly proportioned representative trees I often see” (p.56, Shortt, 2013) (scientific-ecological, aesthetic)

“...two small tree removals in a backyard on lakeshore, beautiful view.”(p.63, Shortt, 2013) (aesthetic)

In a journal dedicated to job description duties, in a city no less, written for the objective of monitoring my learning curve, it is significant to this research to note the prevalence of nature appreciation within the writing, at least in the latter half of this first journal.

DISCUSSION OF JOURNAL #1

In regards to the nature values present in this first journal, it is important to note the change in presence of values from a mostly utilitarian valuing near the beginning of this job and journal, to scientific-ecological, aesthetic, symbolic, naturalistic as the job and journal continued. Utilitarian values were present throughout the majority of the journal and dominated the first half, while the other values listed above began showing up more frequently in the latter half. Although the journal writing did not (and realistically, could not) always show all of my thinking and reflection on different aspects of my life or the job in its entirety, the fact that different valuing of nature made it into the writing at all, suggests a personal belief of the value of nature.

In regards to ecological identity, I believe this journal experience demonstrates several of Naess’ (2008) six points. The heavy focus on content (statements) near the beginning of the journal (as discussed in the reflection portion of this analysis), suggest a narrow focus and my initial process statements derive from blows to my ego. Furthermore, I don’t believe I entirely underestimated myself or my abilities, but I was not overly confident

either. I believe these points in addition to the narrow utilitarian valuing of nature dominating the first half of the journal highlight Naess' first point: We underestimate ourselves. We tend to confuse ourselves with a narrow ego-based concept (2008).

Self-realization though, is tied to the process of the formation of an ecological identity. The following entry, while not speaking directly about nature, is demonstrative of Naess' (2008) fourth point (Increased self-realization entails a widening and deepening of self that enhances the experience of living and the meaning of life):

"Last night while in bed, I was thinking that having the ability to learn, let alone the time, money, and motivation, is an incredible gift. And that I'm lucky to have all those things and should be more excited to learn about anything I can. So I tried to be more eager today, ask more questions, and watch more closely", "I think I will be more confident the next time I get the chance to climb. I figure that part is farthest outside my comfort zone and I will probably learn more." (p.26-27, Shortt, 2013).

This is the only occurrence of Naess' fourth point within Journal #1, but I felt it was important to include as it illuminates movement within the author, as he is beginning to engage his identity in an attempt to enhance the experience of living.

The thematic analysis of Journal #1 highlights two main points:

1. Overall the journal entries change from a mono-valuing of nature (utilitarian) in the first half of the journal, to a multi-valuing of nature (scientific-ecological, aesthetic, symbolic, naturalistic, utilitarian) in the second half of the journal

2. As a whole, the entries in Journal #1 are mostly representative of Naess' first point in which 'we underestimate ourselves. We tend to confuse ourselves with a narrow ego-based concept' (2008)

I believe analysis of Journal #1 provides support that while writing this journal I did value nature in a variety of ways and my writing shows movement past solely valuing nature in a utilitarian fashion. It is also evident that I was mired in the early stages of self-realization and ecological identity formation. It will be interesting to see how (and if) a change in surroundings and reason for journaling will alter the prevalence and variety of nature values, and result in more representations of Naess' (2008) points regarding self-realization and ecological identity.

JOURNAL #2

This journal was written with a focus on reflection, the nature of my research, and my musings on nature. My musings on nature and natural history in this journal come in the form of reflections on areas around Kamloops, my home in southern Ontario, and in stories/memories of nature experiences. As stated earlier in the literature review, biophilia and ecological literacy can promote growth of an ecological identity through meaningful engagement with the natural world and appreciative attention. I hope to identify occurrences of biophilia and/or ecological literacy (potentially through prevalence of positive nature values and senses of stewardship/ethic of care) to elucidate the existence and/or development of an ecological identity in this reflective journal. In continuing to identify changes in nature values present within the writing and representations of Naess' (2008) points regarding self-

realization and ecological identity I hope to be able to document journal entries that suggest the existence and/or development of an ecological identity within myself.

Early entries include conceptualizations of where my interests in the natural world may come from and observations of nature, which are most likely present due to the shift in purpose of this journal.

“The leaves left the apricot tree [in majority] this past weekend...”, “The apple tree still has most of its leaves, and I wonder, if because of the waxy bloom, the leaves take longer to dry and drop”

“...the majority of ‘nature memories’ come from the yard at my parents house. The rest seem to stem from the schoolyard, cubs/scouts, and wandering the town with friends...”, “...so the gully remained a mysterious unknown. Sometimes we would purposely throw a football in there...” (p.6-7, Shortt 2014)

The first excerpt represents scientific-ecological nature value, and the second excerpt represents humanistic and symbolic nature value (emotional bonding with nature, nature used as a source of language and imagination) as the rest of the entry nostalgically discusses memories of exploring the ‘mysterious gully’ and an exciting allergic reaction to burdocks stuck in my shirt. The change in the focus of the journal obviously affects the presence of utilitarian values in my entries.

I believe the following entry is relatable to Naess’s (2008) second and sixth points (Through a process of maturity, we ultimately begin to identify ourselves with the wider biotic community; We face serious ecological challenges that threaten the planet. These threats violate our own self-interests and the self-interest of the entire biotic community. This

threat diminishes the possibilities of a joyful existence for all) regarding self-realization and ecological identity, and represents moralistic (value is expressed when people display an ethical and spiritual connection to nature) and symbolic (nature used as a source of language and imagination) nature values.

“I noticed a Saskatoon berry [tree] hanging over the sidewalk today. The parts of the branches that were hanging over the sidewalk, and less than 6ft high, were rubbed bare, and worn away. In that moment of passing, I saw the earth. Any parts of it that are ‘in our way’, we simply charge through, instead of making an effort to find another way. We are a lazy people. The colours on our phones too mesmerizing for the trees.” (p.8, Shortt, 2014)

Appreciative attention to nature is inherent in the above entry, as is relating myself/human society to the natural world, and our place within it, which is suggestive of awareness in a wider ecological sense in the way the author synthesizes a direct experience and relates it to the wider biological community. An ethic of care is also evident in the above excerpt which is imperative to the development of a meaningful ecological identity.

A subsequent entry exhibits various nature values, and in my opinion, is the strongest example in the journal of recognition of place and realization of connection to the land.

“I am seeing a connection form between my time spent in the Ottawa valley, and my time in Kamloops. Knowledge of the local flora, as well as some natural history, makes me feel far more connected to where I am, than anywhere else I have been (apart from Oil Springs [family home]). I realize I have spent more time in Kamloops and the Ottawa valley than most other places I have been. But it feels different. It feels better. I feel less like a visitor and observer, and more like an... active participant I suppose. A member even, to a sort of club. I

don't know much of the history of Kamloops and don't feel so much a connection to the 'idea' of or city of Kamloops, as I do the land in it and around it. The boundaries of a city could limit a feeling of belonging I suppose, but knowing topography, and common plant species of an area, and that this particular BEC zone with its diffuse boundaries stretches past city limits, allows for a broader imagining of knowing, belonging, comfort and to an extent, my own place within this land. The plants and land features have been here longer than people have, so to know the natural history, is to know this land." (p.11-13, Shortt, 2014)

This entry is important as it recognizes how a connection to the land can alter a sense of place, and suggests identity engagement in relation to the wider biotic community (Naess's [2008] fourth point regarding self-realization and ecological identity). This entry helped me to realize the potential of natural history and changed how I view 'borders'. It is evident that I am regularly engaging my identity as I attempt to relate to the natural world and identify my place within it. I am actively participating in a process of self-realization and locating my identity. Meaning-making is also evident in the previous entry in the way I attempt to define my understanding of intangible boundaries and real usefulness in employing natural history practices.

A later entry demonstrates my participation in creative meaning making, using characteristic sounds of trees to highlight the 'sound of nature' around campus and very specific types of weather. Not evident in the entry is that I am comparing the characteristic sounds of Red pines (which are very common where I am from, and remind me of home) to the sounds of Douglas firs (which are common in Kamloops, not where I am from) which is interesting in that natural sounds are able to induce memories and conceptions of home.

“Red pine rustles, Doug Fir tustles. It is the needle size that determines rustling or tustling. You can hear the difference on early winter days, when the sky is black and blue, and the wind barrels through the tree tops. It is the kind of wind that doesn’t touch ground, and its roar makes you glad that it doesn’t. These early winter days eliminate friendly chatter outside, and even inside, near doorways. Everyone’s shoulders come up to their ears, and they walk, or rather shuffle, with speed between buildings. I walk like this too. The difference being that I am looking up, and take the time to refresh my memory of the sound of this particular wind, that only comes around on early winter days. It is this wind that helps the red pines, and doug firs make their true sounds. There is a lot of tustling around campus.”
(p.15, Shortt, 2014)

This entry includes symbolic (nature seen as a source of language and imagination), scientific-ecological (having or seeking knowledge and understanding of nature) nature value. This entry is also representative of Naess’(2008) second point, as I am relating myself to the natural world (and notions of home) through natural sounds from the wider biotic community.

A final entry before Christmas break contains a further exploration of the idea of boundaries, brought forward by Aldo Leopold, and confirms the prevalence of the utilitarian valuing of nature in modern society (which shows understanding of, and movement past, this value). It contains symbolic, aesthetic, and moralistic nature values, and I suggest, demonstrates points two (identify ourselves in relation to the biotic community) and six (ecological challenges, threaten our self-interest and interest of the biotic community) of Naess’(2008) six points regarding self- realization and ecological identity.

“I liked his idea of walking the land with his dog before the county clerk is awake in the morning, thereby nullifying the invisible boundaries separating his domain of existence and the rest of the world. I understand the need for boundaries, and mans need for ownership and control, but these are the reasons after all, that we have divided and exploited our lands resources and cut down our forests. Boundaries came to mind as we flew closer to Toronto, and I could see the lands natural curves, and meandering creeks, oblong lakes, and sprouts of forest, change into perfect squares and rectangles of mine and yours. Even the trees left to grow, mostly existed along the property lines/fence lines, and the ponds/lakes somehow seemed more uniform, like a size 10 000 mens shoe walking across the land, driving in stakes, leaving puddles just big enough to sustain his property’s needs. What about everyone elses needs? What about fresh air? What about water and long safe tree lines for deer and turkeys to run in and out of. Divide-and-conquer has always been a war term describing a method for defeating your enemy. Why then, oh brave man, have we declared war on the very lands that sustain us? I understand now that education, and lobbying, and “doing the right thing” are not enough, and that to do real good and spread a real ethic of care for the land, we must once again fall in love.” (p.24-25, Shortt, 2014)

This entry confronts utilitarian value and moves past it. I identify myself (and society) in relation to the wider biotic community (Naess’[2008] second point) and address ecological challenges that threaten the planet. The threats violate our own self-interest (in having a healthy environment in which we can share) and violate the interests of the entire biotic community (Naess’ [2008] sixth point). I am synthesizing a number of ideas into a personal definition of what biophilia is, and why it should be important to us. At this approximate half way point in Journal #2, it is evident that the author has moved past a general utilitarian

valuing of nature, to more personal and biophilic nature valuing (ex. aesthetic, symbolic, moralistic). The change in presence of nature values may represent my attempt to relate myself in more meaningful ways to the natural world and the increased instances of Naess' points suggest identity engagement and my attempt to break away from my narrow view to one of wider and more meaningful value. This is significant to this research's objectives in identifying the existence/development of an ecological identity.

The few entries completed while visiting home continue the exploration of ideas of boundaries and focus on the familiar flora and fauna that I grew up with.

"I'm proud and thankful that this 20 foot ash is clinging on, and somehow deterring the beetles, ...probably through pure charm" (p.26, Shortt, 2013).

"Yes there are official boundaries around the property, but the real boundaries are fuzzy. Where the thorn trees get too thick on the west side is a boundary, where the creek goes wide and butts up against a steep muddy bank is a boundary, and the farmers field is a boundary (only because there has never been much of a reason to explore there)" (p.27, Shortt, 2014)

"I haven't seen fox tracks around here for some time. All of the oaks around here are looking pretty old and gnarly, just like the dog" (p.30, Shortt, 2014)

"I realize it's not the fact that I missed out on creating the trail that's bothering me. It's that this little bush that I always felt was my secret get away is, ...no longer mine. Of course it was never mine to begin with, but it had always felt like I had some ownership, since I had spent so much time exploring these woods..." (p.31, Shortt, 2014)

“It is not until recently, 20 years later, that I’ve begun to understand and appreciate all of the systems and processes and characters present in the back bush, and I look forward to seeing, and meeting new ones” (p.33, Shortt, 2014)

Numerous nature values per entry seem to be commonplace. Scientific-ecological (having or seeking knowledge and understanding of nature) , naturalistic (a focus on exploration and discovery of nature), symbolic (source of language and imagination), and humanistic (emotional bonding with nature) are all present within the above excerpts and throughout their respective entries. These are relational and biophilic values, seen in my nostalgic and exploratory spirit within the writing. The story like qualities of these entries are my attempts at natural history practice, as I walk the paths and creeks of my past, with new appreciation and understanding. I believe these excerpts are also representative of Naess’ (2008) second point, in that the author is practicing relating himself to the wider biotic community. I also seems to be reaching a level of understanding or maturity in my relationship with the natural world as I begin to understand my conceptualizations of meaningful natural ‘places’ and in that natural boundaries are becoming more visible. It is easy to look at official boundaries as they are often defined with fence line, tilled earth, roads or ditches, so the fact that I am beginning to see past these ‘official’ boundaries suggests a stronger ecological lens within myself, and movement past a simply ‘economical’ lens.

Several entries upon arrival back in Kamloops focus on my research and academic struggles. Nature values or representations of Naess (2008) points are absent within these entries. Much of the remaining writing focuses on my own discovery of why having an ecological identity is important, modern society’s disconnection from the natural world despite being intrinsically tied to it, and natural history revelations regarding mixtures of

specific species of flora, and the places I associate with them. I believe the following entry, one of the last in the journal as my research comes to an end in favor of school work, is an excellent example of synthesis of the ideas I have been mulling over during this research project,

“People see themselves as separate from ecology, if they see themselves at all. Economics do not replace ecology, and they do not move independently of ecology. As Lyn said, massive feed lots make sense economically, perfect sense. But ecologically, they are absurd. Over-fertilization, trampling, unsustainable, poisoning the earth. Natural history, and even reflective journaling with a nature inclined mind, is good for helping us realize that we are not separate from ecology. Not in the slightest. As gravity is law, so is our contact with ground, land, air and water. This is the essence of an ecological identity. Creative writing literature holds that minds are constantly scanning and groping and creating metaphors to make sense of the chaos that is our world. These metaphors are meant to simplify an idea, a view, a concept, so that we may accept it into our mental map of understanding this, space. Lyn recently spoke with me and raised the idea that ecology, and natural history have a way of raising more questions, the closer we look. The metaphors of wild things and beautifully complex, yet simple natural processes force us to relate to a more-than-human world, a world much bigger than ourselves. These metaphors are opposite in a way from those previously mentioned in creative writing. They do not simplify or narrow to a point so that we may accept them and consume them and move on to a new...thing. They open our eyes to wonder and questions and draw us into the ever expanding and wonderful processes of the natural world. It is maybe this culture of quick answers, quick learning and consumption, that inherently discourages us from participating in purposeful, lifelong learning, and the

never ending well of wonder that exists in the natural world. Not OUR natural world to consume and inventory, but ours to re-invigor and nurture a relationship with. This relationship must be a personal one to begin with, before we can discuss and nurture it together. This highlights the importance of an ecological identity, and personal reflection on ones relation to the natural world.” (p.41-43, Shortt, 2014)

This entry demonstrates Naess’ (2008) second (through a process of maturity, we ultimately begin to identify ourselves with the wider biotic community) and sixth (We face serious ecological challenges that threaten the planet. These threats violate our own self-interests and the self-interest of the entire biotic community. This threat diminishes the possibilities of a joyful existence for all) points. I have engaged in meaning making in the previous excerpt as I synthesize a number of ideas into a personal definition of ecological identity and why it should be important to us. I also address the crisis of perception that exists in society today, and have clearly become an active participant in furthering my knowledge and understanding of the natural world. This excerpt also contains naturalistic and humanistic nature values, and again addresses the common utilitarian valuing of nature in society today. When compared to Journal #1, it is evident that with practice and a change in focus, I have made progress in understanding my connection to the natural world, and that my economical lens has begun to shift to include ecology.

CONCLUSIONS

To reiterate, the goals of this analysis were to:

1. Identify a shift in the prevalence of nature writing within the analyzed journals

2. Identify representations of Naess' (2008) points regarding self-realization and ecological identity within the journals
3. Explore the use of reflective journaling (combined with natural history practices) as an effective pedagogical tool for identifying/developing an ecological identity

This analysis has shown a shift in the types and prevalence of nature values within the journal writing. It is evident that Journal #1 had a generally utilitarian view of the natural world, although alternate, more relational, nature values began to appear later in the journal. Journal #2 demonstrated a substantial increase in the prevalence of nature values as well as in the variety of nature values evident within the entries. The nature values within Journal #2 were inherently more relational (ex. scientific-ecological, moralistic), emotional (ex.humanistic) and wonder (symbolic, naturalistic) based than the previous utilitarian value concentration, demonstrating that I am actively (consciously or subconsciously) attempting to better relate myself to the natural world. The prevalence of nature values within Journal #2 also suggest an inherent valuing of nature in general. I believe it can be suggested that a personal relationship with nature is clearly developing within me, which is emblematic of an ecological identity. The increased frequency of emotional and wonder based valuing of nature within the journals suggest the existence of a level of biophilia within me, which, as stated in the literature review, is believed to increase the 'possibility of achieving individual meaning and personal fulfillment' while furthering a 'human ethic of care and conservation for nature, most specially the diversity for life'" (Kellert & Wilson, 1993, p. 21, as cited in Burgess & Mayer-Smith , 2011, p. 28).

Representations of Naess' (2008) six points regarding self-realization and ecological-identity were shown to be present within numerous entries. This analysis has identified that I have 'moved' from the first (We underestimate ourselves. We tend to confuse ourselves with a narrow ego-based concept) to the second (Through a process of maturity, we ultimately begin to identify ourselves with the wider biotic community. We reach a maturity in all our relationships) of Naess' points (in general), and that he has an understanding of Naess' sixth point (We face serious ecological challenges that threaten the planet. These threats violate our own self-interests and the self-interest of the entire biotic community. This threat diminishes the possibilities of a joyful existence for all). The movement from point one to point two of Naess' (2008) six points, and an understanding of the sixth point, delineates development of an ecological identity (in the earlier stages), and that I know where I want to go in my journey of development (as shown by numerous representations of point six). These journals have provided a space to practice participation in the process of developing a meaningful ecological identity and allowed me to document changes within myself on my journey towards self-realization and the development of a 'full' ecological identity (in relation to Naess' [2008] six points).

In regards to the growth of an ecological identity I believe there are several arguments that can be made to suggest that this research has uncovered the existence of an ecological identity within me. As stated in Thomashow (1995) "the idea of ecological identity is complementary and parallel to ecological literacy. As Orr suggests, ecological literacy requires the 'more demanding capacity to observe nature with insight, a merger of landscape and mindscape'" (p.176). The existence of a number of Naess's (2008) six points, namely points two, and six within the analyzed journals suggests at least the beginnings of a

merger of landscape and mindscape which is in tune with ecological literacy/ identity. This merger of landscape and mindscape suggests a relationship with the natural world, and the number of nature values present within the journals, in addition to entries likened to Naess 2008 six points, suggests a level of care and value for the natural world within myself. I believe these are representative of steps in the process towards: embodying the basic principles of ecology in daily life (Capra, 1999), considering how (my) actions, values and ideals are framed according to (my) perceptions of nature (Thomashow, 1995), furthering a personal ethic of care (Thomashow, 2002) which will add to the depth and value of a personal ecological identity. This developing ecological identity, combined with the developing merger of landscape and mindscape evident within my writing (as discussed in this analysis) may assist me in bridging the gap between economy and ecology in his decision making process.

Ecological identity and self-realization are elusive processes, made even more so in a (modern) society that encourages disconnection from nature, and in turn, ourselves. These processes are ever evolving, and are the starting points of a new paradigm in human and more than human relationships. Reflective journaling, natural history and experiences in nature are all steps in this process, and could potentially be used in a larger societal shift in thinking. By continuing these practices/processes, I can continue to explore and change my perception of a much larger and more profound way of being in and relating to the world.

Although my natural history skills are amateur, the journal entries based on outdoor experiences and observations generally contain an excess of nature values, and in some cases, representations of Naess' (2008) six points regarding self-realization and ecological identity. I believe natural history is an excellent practice to combine with reflective

journaling, for the purposes of relating to the natural world and enhancing/developing one's own ecological identity. Since natural history requires direct experience in nature, I believe it has greatly affected the results of this research, as without the impetus to explore nature, much of this writing may have resulted in baseless musings on the natural world with significantly less occurrences of nature values, and an overall more superficial level of reflection (since meaningful reflection generally requires direct experience).

WEAVING THE ANALYSES TOGETHER

This final conclusion will weave together and surmise the findings of the reflective and ecological identity analyses of Journals #1 and #2, in relation to this research's objectives, which was to explore the use of reflective journaling (and natural history practices) as an effective pedagogical tool for the development of an ecological identity. Analyzing this subjective research has been a very personal and difficult journey. I feel that an amount of criticism and apprehension exists in the academic institution and its colleagues in regards to this sort of subjective research, which elicited extensive critical assessment of the validity of my research and methods, and propagated a defensive attitude within myself. I believe one strength of this kind of subjective and qualitative research is an increased understanding of one's self, and one's place within the (natural) world. If we do not understand our 'self', where our place is, or how our actions affect others /the wider biotic community, then I do not believe we are using the fullest compliment of our abilities and emotions to better our experience of the time we have on this planet.

The critical analysis of my reflective journals demonstrates that the journal serves as a vessel for thinking and recording my thoughts about the natural world. Movement away from content focused, superficial reflection, towards process focused and deeper (critical reflection) has been demonstrated by the analysis of both journals through a reflective lens. There are prominent differences in my writing content and attitude within the journals, and regardless of progression; analysis of these journals has taught me about the range in attitudes in regards to the natural world and reflective thought, and shown me what is possible with continued practice and participation. It has become evident that I have begun regularly engaging my identity through reflection to gain a more critical look at my habitual way of experiencing the world around me, which has allowed for reconstruction and reorganization of my experiences which adds to the meaning of said experiences. My writing 'voice' has also clearly developed over the course of this writing journey, which I believe is emblematic of development of my personal identity. The development of convergence of emotion and cognition within my writing suggests deeper, critical reflection and successful reflective growth in my participation in the reflective process.

The analysis of Journals #1 and #2 have demonstrated movement past a utilitarian valuing of nature within myself, to more personal and biophilic valuing. I believe this analysis has successfully evidenced a developing relationship between the author and the surrounding natural world as he understands it. Representations of Naess' (2008) points regarding self-realization and ecological identity have been identified within the authors writing and suggest that the author has found a path that is leading him towards the development of a meaningful ecological identity. The natural history practices of direct experience and observation in nature have been shown to be effective in providing

meaningful reflection material for the author, as well as in providing opportunities for the author to identify himself in relation to the natural world. An ethic of care and a merging of landscape and mindscape are apparent in the my development throughout my journaling process which delineates, at least, the existence of an ecological identity within the myself. I am unaware of a method that can be used to ‘measure’ the depth/size/quantity of such a thing as an ecological identity, but based on the research I have encountered, and the analysis I have presented, I believe it is evident that I do indeed possess the spirit of an ecological identity within me, and that with continued participation in the process (of experiencing nature, reflecting, and writing), I will undoubtedly continue to develop a meaningful understanding of, and relationship with the natural world and my understanding of self in relation to it. Based on these findings I believe that this analysis has been successful in identifying reflective journaling (and natural history practices) as an effective pedagogical tool for the development of an ecological identity.

RECOMMENDATIONS

Throughout this research, I have come to understand numerous factors that have helped and hindered my process of identity development and reflective growth. Based on the challenges, successes, failures I have experienced during this research, I have identified a number of recommendations for my future reflective journaling, and for practitioners who may wish to employ the methods I have explored. If I had been aware of, and included these recommendations in my journaling practice from the beginning; the analysis may have illuminated further identity and reflective development. I believe the methods I have employed, combined with the following recommendations will result in a more holistic learning experience, and more meaningful reflective writing.

1. Make the time to write. Write often. Frequent, shorter entries are just as valuable, if not more so, than fewer, long entries. Just as reflection is a process with no end, so is reflective journaling. Continued participation in the process will continue to elicit meaningful learning.
2. Writing with a subtle agenda is a good tactic for developing an idea. Spontaneous writing is a valuable way to 'check-in' with myself and practice awareness.
3. Reflecting on changes in my writing by looking back at my old work can be rewarding and beneficial in understanding personal growth. Write about these reflections.
4. Consider writing reflectively in correspondence with another reflector, as bouncing ideas off of others has often resulted in more meaningful reflections in my own writing.
5. Write outside in poor weather and good. Get outside!
6. Keep a small notebook and take down notes and thoughts regularly as impetus/material for later journaling.
7. Consider the audience. Are you writing for yourself? Are you writing, knowing that people may read it later? Writing as if I am the only one who will ever read it changes the content. Privacy and our familiarity with it affects the product of our writing.
8. Continue to put myself in situations with which I have little experience or in which I feel I am out of my comfort zone. Situations like these make it easier to step out of my habitual reactions to situations and learn more about myself.

9. Continue to engage my personal identity via unfamiliar situations/experiences, meaningful reflection/consideration of experiences and my relationship with them. Combine these antecedents for identity engagement with outdoor experiences to create conducive conditions for ecological identity growth.

By following these recommendations, I believe my reflective ability will continue to grow and meaningful writing will occur more frequently. I also believe that by following these recommendations, my natural history practice will improve by spending more time outdoors, making the time for frequent writing, and by putting myself into situations with which I have little experience.

While searching for relevant literature and research to inform my understanding of the topics contained herein, I noticed several gaps in the existing research. I also recognized ways in which my research could be improved upon and/or expanded. More qualitative and quantitative research on reflection as a learning and development tool is needed to illuminate the import of these ideas in the academic institution. In regards to future research, I suggest the following ideas:

1. Explore the connections between the development of voice in creative writing and reflective journaling. Can they complement one another?
2. Explore the connections between creative writing and Natural History (writing). Can these practices complement one another? Can they be used together effectively in developing an ecological identity?
3. Research reflective journaling as an effective learning tool in understanding and synthesizing course material. Several studies exist on this subject, but a wider range of

studies focusing on various disciplines could prove beneficial to understanding the validity and usefulness of reflective journaling for learning.

CONCLUSION

To me this work has identified the usefulness of reflective journaling and natural history practices to be useful in engaging/developing identity and understanding myself in relation to the natural world. By furthering research on such a valuable tool, we can better understand how to promote awareness, understanding of self, and identity engagement in ourselves and in others. If we can be more aware of how our actions affect ourselves, the people around us, and the natural world that sustains us, we can leave a meaningful impact in the lives of others and in *our* environment.

Most importantly, this work has allowed me to reflect meaningfully on my understanding of the natural world and my identity in relation to it. With continued practice, I think this relationship will increase in value, depth, and understanding. Thus, I believe my work in this project laid a foundation for my future career as an educator. The practice I have gained in this project will allow me to include some of these methods into my teaching practice, and foster an ethic of care within my students and promote identity engagement and development. Promoting the development of voice, confidence and identity within my students can begin to elicit an environment of individuality and understanding, in response to the neoliberal attack on identity that we see in the elimination of identity building programs in schools such as creative writing, unstructured play, arts and music. Finally, by fostering an ethic of care and understanding for the natural world in my (future) students, I hope to be able to address the crisis of perception that causes people to see themselves as separate from

ecology. In helping students see themselves as an inherent part of the natural world around them, they may be successful in beginning to make ecologically, and economically sound decisions.

This research has demonstrated the value of reflective journaling by providing a medium in which I am able to analyze how I personally value nature, and how I view myself in relation to ecology and the environment. The act of ‘writing it down’ added permanency to the ideas I was exploring, and inherently required time for reflection and processing of those ideas (and experiences). Reflective journaling has allowed me to engage in meaning making as I have begun to relate personal experience to my perceptions and understanding of the natural world. By making meaning, I am actively engaging in an ongoing process of relating myself to a much larger (biotic) community and attempting to discover my place within this much larger community of ecology. By relating to the natural world that inherently connects us all, it may allow me to begin to transcend the artificial economical and societal barriers that hinder our relationships with each other and with the natural world. As I continue to reflectively journal, and develop my conception of self into one that includes ecology, it is my hope to realize my capacity for human-earth relations in a communal affinity with the natural world. When I can find myself in the natural world that sustains us all, I believe I will be able to better see myself in others. This will provide me the means of helping others discover their own connection to the natural world, and in turn, their own ecological identity.

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