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The Logic of School Gardens: A Phenomenological Study of Teacher Rationales

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Abstract Despite the importance of teachers to the school garden movement, we still know very little about what drives particular teachers to incorporate a school garden into their pedagogy. In response, this article reports the findings of a study designed to investigate the internal processes and products involved in rationalising and sustaining teachers' use. Analysis of interviews with three primary teachers — Laura, Meredith, and Clare — indicate that a powerful rationale is formed when teachers read their childhood memories, often idealised, against their observations of children today. This rationale is strengthened by opportunities afforded by the garden itself, which allows teachers to enact their deepest beliefs about teaching and learning and resist external controls. This study also provides evidence that a school garden can easily evoke nostalgia. The article ends by re-theorising this nostalgia as part of the 'cultural logic' (Enfield, 2000) of school gardens, while suggesting nostalgia's productive uses.

This article reports the findings of a research study designed to interpret the experience of three primary teachers who choose to incorporate a school garden into their pedagogy. Of particular interest are the internal processes and products involved in rationalising and sustaining their use. By considering how these things interact with institutional and cultural incentives, this study deepens our understanding of why some teachers choose to use a school garden for teaching purposes while others do not. The knowledge generated by this study is intended to bring teachers to the foreground of school garden discourse and practice and to inform environmental educators who cooperate with teachers on garden-based projects.

Background Literature and Research Questions

Landscape architect Robin Moore claims that school gardens are 'unsurpassed' as a site for interdisciplinary environmental education (Moore, 1995, p. 230). Recent research evidence within the field of environmental education appears to support his claim, as well as providing metaphors for continuing this work (Gaylie, 2009; Judson, 2010; Thorp, 2006; Williams & Brown, 2012). Additional research suggests that school

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gardens can have positive effects related to student learning and behaviour, value development, and the physical body (Blair, 2009; Lekies & Sheavly, 2007; Ozer, 2007). However, faced with the 'constraining regularities' (Smith, 2007) of public schools, many school gardens fail as educational sites, and those that succeed often require exceptional support from participant researchers, parent volunteers, external funders, and community partners. This is particularly true of school garden *programs* — efforts designed to alter educational practice in fundamental ways (Graham, Beall, Lussier, McLaughlin, & Zidenberg-Cherr, 2005; Skelly & Bradley, 2000). Paradoxically, the same environmental education literature that details the success of particular school gardens and school garden programs also demonstrates the peculiar nature of success and the extent to which success depends upon the intensive involvement of persons other than teachers (Cutter-Mackenzie, 2009; Mayer-Smith, Bartosh, & Peterat, 2007; Thorp, 2006).

This situation is not necessarily problematic. Important outcomes result from such complex communities of practice. However, I would argue that for school gardens to impact education and culture at a general level — which is what many in the school garden movement, including environmental educators, would hope for — teachers will need to play a much more central role in school garden discourse and practice. Otherwise, school gardens risk the fate of previous educational innovations in which examples of what *could* be under exceptional conditions become common, while examples of widespread adoption by teachers remain rare (Elmore, 1996). From this perspective, a deeper understanding of the reasons why certain teachers choose to incorporate a school garden into their pedagogy is critical to the success of the movement.

This understanding will require additional inquiries into how teachers' beliefs and previous experiences become activated in particular school garden contexts (Blair, 2009; Ozer, 2007). To date, a number of survey-based studies have indicated teachers' needs: additional training in horticulture, including in-service opportunities and classes at higher education institutions; exposure to successful school garden models and practices fit for local conditions; curriculum, lesson plans, and activities tied to academic standards; instruction in how to use the school garden to integrate the disciplines; and ongoing support from volunteers (Demarco, Relf, & McDaniel, 1999; Dobbs, Relf, & McDaniel, 1998; Skelly & Bradley, 2000). These studies have surveyed the general landscape of teachers' experience, but the methodology has not captured the depth and richness of this experience or the private sources of teachers' empowerment. Although teachers may be the 'mainstay of school gardening' (Blair, 2009, p. 35), we still know very little about what drives particular teachers to incorporate a school garden into their pedagogy in the face of the many challenges involved.

In response, this study takes garden teachers' experience to be the *primary* phenomenon of interest, a turn which is preceded by several research studies in environmental education. For example, in her participatory ethnography of a school garden program in the American Midwest, Laurie Thorp (2006) introduces us to a number of primary teachers — including Sue, Carol, and Gloria — and shows how the school garden helps sustain their pedagogical commitments in the face of constant curriculum change. And in their theoretical and case-based inquiry, Williams and Brown (2012) introduce us to Dezire, a primary teacher in Oregon who experiences the school garden as a place where she can 'be true' to her beliefs about teaching and learning (p. 164). This study is designed to more deeply explore the internal landscape of primary teachers such as Sue, Carol, Gloria, and Dezire. The guiding questions are as follows:

1. Why do certain teachers choose to incorporate a school garden into their pedagogy?
2. What internal processes and products are involved in rationalising and sustaining their use?

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The Cultural Logic of School Gardens

Enfield's theory of 'cultural logic' (2000) proposes that groups of individuals can negotiate a more-or-less shared set of meanings from among their private representations by attending regularly to a 'mediating structure' (p. 42). Enfield's theory positions the garden as a place where teachers' private meanings transact with one another and with a variety of public meanings. Thus, when *tending the garden*, teachers participate in a cultural project, revitalising a set of concepts and metaphors that have been attached to gardens generally and to school gardens in particular (Francis & Hester, 1992; Marcus, 1992; Williams & Brown, 2012). The social significance of this function helps explain the persistence of the school garden idea.

In America, gardens have been addressed by several major studies in cultural history (Marx, 1964/2000; Smith, 1950). Leo Marx argued that the garden serves Americans as a 'metaphor of the ideal society' (p. 85) — agrarian, pastoral, self-sufficient. Similarly, Smith (1950) suggested that the garden functions within American culture as myth and 'master symbol' (p. 123), one strong enough to maintain an 'old agrarian calculus' (p. 157) within an industrial, urban society. Gardens continue to represent economic, political, and social alternatives, as in Liu and Hanauer's (2011) recent book, *The Gardens of Democracy*.

Within the culture of environmental education, school gardens serve additional purposes of reassurance and reconciliation (Francis & Hester, 1992; Marcus, 1992). For one, the 'tenacity' of the school garden movement reassures environmental educators of a stable foothold within K–12 settings (Gaylie, 2009, p. 27). Additionally, as a setting for multiple types of environmental education programs, the school garden helps reconcile competing agendas within a complex pedagogical field (Sauve, 2005). If, for example, school gardens are as good for teaching ecological sustainability as they are for teaching social justice (Miller, 2007, p. 15), then school gardens help bridge the divide opened by an 'ecojustice revisionism' (Buell, 2005) that has swept through environmental thought, including environmental education (Bowers, 2001; Martusewicz, Edmundson, & Lupinacci, 2011). If environmental educators cannot agree on everything, it seems at least we can agree that a school garden is a good thing.

Research Methodology and Methods

This study adopts the methodology of phenomenology. As a philosophical framework for interpretation, phenomenology orients a researcher towards two intersecting levels of meaning: the meaning given to an experience by research participants — their 'self-explication' (Schutz, 1967, p. 100) — and the meaning given to these same experiences by the researcher. Although phenomenological research seeks to interpret things and experiences 'in themselves' (Moustakas, 1994, p. 27), researchers in environmental education have often adopted a more critical approach. Hart's (1996) notion of a 'critical interpretive methodology' (p. 61) helps elaborate the ways in which this study — as an inquiry into an *environmental education phenomenon* — foregrounds the gaps that exist between teachers' sense-making and the possible worlds suggested by environmental educators.

Research Site

In the fall of 2010, I was introduced to the executive director of a school garden program on the grounds of a primary school in a rural suburb of a large city in the American Midwest. When I first visited this school's garden program, I was impressed by its scale, level of organisation, and sustainability. This program is a decade old, supports nearly 100 garden beds, and offers workshops for groups and individuals hoping

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to start their own school garden program. A key part of this program's success is the work of several garden coordinators who design garden-based lessons. The majority of these lessons are tied to state science standards. Because the subject of science is not currently tested in this particular American state, the science standards remain 'soft' standards — more of a map than a script — and this allows for alternative approaches to instruction such as gardening. In addition to designing lesson plans, the garden coordinators are available to lead and teach students while in the garden. In this institutional context, garden coordinators function as a strong incentive for teachers' use of the school garden.

Participants: Laura, Meredith, and Clare

Three primary school teachers participated in this study, which was conducted during a doctoral-level, qualitative methods course sequence. At the time of the study, each teacher was a regular user of the school's garden. I limited study participation to regular users because this indicated a baseline enactment of garden pedagogy from which I might conduct an analysis across cases. In addition, as regular users, each participant had considerable experience with the phenomenon under investigation, a requisite of quality phenomenological research (Moustakas, 1994; van Manen, 1990). A sample of potential participants was initially recommended by the garden program's executive director, who is not employed by the school. Study participants were then contacted and selected by me following detailed consultations with each about the study's purposes and processes. This study was reviewed and approved by the University of Cincinnati's Institutional Review Board (IRB). The names of participants have been changed to pseudonyms. Each is briefly described below.

Laura is a Caucasian female, a second-grade teacher of science, math, and social studies. She has a strong desire to help her rural-suburban students appreciate their experiences, including the experience of school gardening. Laura locates a summer spent as a camp counsellor as a significant outdoor experience, and an experience that helped her understand why her students would want to be outside. She takes her class to the garden on a weekly basis, and communicates regularly with her garden coordinator to plan lessons. Laura appreciates the structured approach to experiential learning afforded by the garden program.

Meredith is a Caucasian female and currently teaches fourth grade science and math. She was not interested in the garden program initially. At that time, garden classes took place just outside her first-floor classroom and the noise was disruptive. Because her curriculum at that time focused on animals, garden teaching appeared to Meredith as something extra she would have to do. Things changed during a year that Meredith taught the son of a garden coordinator, the same year that Meredith's science curriculum changed to focus on plants. With the garden coordinator planning and leading the lessons, Meredith began using the garden regularly.

Clare is a Caucasian female and a second-grade teacher of all subjects. At the time of the study, Clare had been teaching at the school for 9 years and had witnessed the evolution of the garden program. She locates the linking of the garden program with state science standards as a significant event that helped justify spending an hour a week in the garden. Clare believes the standards-based lessons justify the program primarily for administrators and teachers. She appreciates the work of the garden coordinators, which she believes increases the educational value of the experience. Clare has begun a home garden, based upon the skills and knowledge she has learned from her participation.

Data Collection

Because the phenomenon of interest involved internal processes and products, I chose in-depth interviewing for data collection purposes, concluding that a phenomenological approach would give each participant the best opportunity to freely discuss their feelings, attitudes, and values related to the phenomenon of interest (Anderson & Jack, 1991). I based these interviews upon Seidman's (2006) phenomenological approach. Each teacher was interviewed two different times, with each interview lasting between 60 and 90 minutes. The first interview provided an opportunity for each participant to share their life history related to family, education, and the outdoors. This life history served as the context for the second interview, which asked each participant to share their lived experience as teachers who choose to incorporate a school garden into their regular teaching practice.

Data Analysis

In their theory of qualitative data analysis, Maxwell and Miller (2008) argue for an integration of similarity-based and contiguity-based strategies. I began my data analysis with a contiguity-based strategy inspired by the Listening Guide method (Gilligan, Spencer, Weinberg, & Bertsch, 2003). During a first 'listening' I attended to the general plot and substories within each interview, noting repeated images, dominant themes, and contradictions (p. 160). Following this listening, I returned to the data, using coding as a categorising strategy (Richards, 2009). Categories and concepts that emerged from coding — as well as corresponding excerpts from the interview transcripts — were placed into a matrix to guide additional readings (Miles & Huberman, 1994). Data analysis ended when I felt I had identified the 'invariant constituents of the experience' represented by the data — in this case, the experience of three teachers who choose to integrate a school garden into their pedagogy (Moustakas, 1994, p. 121).

Findings and Discussion

This study was designed to explore why certain teachers choose to incorporate a school garden into their pedagogy, including the internal processes and products involved in rationalising and sustaining their use. Analysis of the interviews indicate that these three teachers draw primarily from three internal sources: *environmental memories*, *observations of children's behaviour*, and *beliefs about teaching and learning*. In addition, *nostalgia* is noted as a strong affective theme. I interpret these themes as potential sources of empowerment that become active in the presence of external incentives, the most significant of which, in this case, is the availability of garden coordinators and lesson plans linked to state science standards. I interpret teachers' nostalgia as the primary affect of the cultural logic of school gardens.

The Role of Teachers' Environmental Memories

During their first interview, each teacher was asked to share their memories of time spent in nature. In response, each shared memories of a childhood spent predominantly outdoors. Although environmental education researchers have taken a particular interest in the adult role played by such experiences (Chawla, 2006), the fact that these memories are set outdoors is not necessarily significant, or surprising. The interview questions were designed to elicit such memories, and research evidence suggests that the vast majority of adults will identify the most significant places during their childhood as being outdoor places (Sebba, 1991). In other words, despite the richness of these memories, which are detailed below, there is no simple, causative relationship between their past and their present commitments as garden teachers (Kaufman, Ewing, Hyle,

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Montgomery, & Self, 2006, p. 324). What *is* significant — and most remarkable — are the characteristics of a natural environment capable of making such a lasting impression (Sebba, 1991), an impression deep enough to rationalise similar experiences for others under certain conditions.

Some of the memories shared by the participants are specific memories. For example, Meredith shares that she once collected earthworms, which she hid in a jar under her bed until her father found them, and Laura recalls how she slept under the stars in her parents' backyard for weeks after her summer as a camp counsellor had ended. In addition to these specific memories, each shares more general memories of being outside. Across the different data sources, these general memories appear idealised. Through them, participants construct a childhood pastoral during which, as Laura recalls, 'everyday was outside':

> *We grew up in an age, you probably did too, where, you know, you were outside until dark. So, I can't really remember ever being inside playing. I feel like I spent every waking moment … I'd come in smelling like fresh air, you know? And it's unfortunate that it's not as much like that anymore.*

Here, Laura locates her childhood as a specific 'age' or time period during which 'being outside until dark' was a common and locally shared experienced. She expresses a sense of loss that 'it's not as much like that anymore'. This sense of loss adds nostalgic overtones to her memory. Guided by Wilson's (2005) work on memory, nostalgia, and identity, I interpret Laura's nostalgia as an 'emotional experience' that is 'corollary' to her act of remembering (p. 8). Far from unique, Wilson suggests that such nostalgia is often involved when an adult recalls a past believed to have been a better setting for childhood (p. 83).

The two other participants also recall a childhood during which the majority of free time was spent outdoors. Clare shares:

> *Growing up, you were outside when you were home. You were outside from the time the sun came up until it went down, and we used to say that, you know, your mom didn't really call you, but as soon as the streetlights came on, that's how you knew it was dinner time and you would go in then. So we spent a great deal of our time just, you know, playing outside, whether it was riding bikes or climbing trees or playing in the woods, playing in the pond behind our house, that kind of thing. I mean, you did that all day long with your neighborhood friends and just kind of ran and things. That's, you know, how you did it.*

Idealised elements appear in Clare's suggestions that 'You were outside from the time the sun came up until it went down' and 'you did that all day long'. Her addition of 'we used to say that' appears to reflects her awareness of the more idealised elements of her story. Interestingly, Clare's use of 'you' throughout serves to incorporate the researcher and others into her narrative, and again a specific time period and generation are constructed. Nostalgia is evoked with references to the 'sun' going 'down', 'streetlights' coming on, and it being 'dinner time'.

Meredith's environmental memories are closer to home and more pragmatic. Many of them are set in a backyard landscape, the inner ring of a childhood outdoors (Raymund, 1995; Sobel, 1993). Although feminist research in environmental education suggests that fathers play a central role in limiting their children's experience of the natural world (Kaufman et al., 2006), this role was played by Meredith's mother, who forbade her from going 'down in the woods' after her brother 'got beat up' there. Despite these limits, Meredith recalls:

> *When I was younger we had a group that played outside all the time and we played wiffleball and ran around outside. I had a pool in the backyard growing up so we were always, always outside.*

As she recalls at another point in the same interview: 'When I was growing up, everybody was outside, and we just played.'

To say that these three teachers' environmental memories are idealised is not to suggest that their memories are not accurate representations of the past. The open and unconstrained situation under which they were recalled suggests their accuracy (Neisser, 1988, p. 548). More than their accuracy, however, this study is interested in how these memories help rationalise their choice to use a school garden for teaching purposes. Approached from this perspective, memories of being 'always, always outside' and of being 'outside until dark' work as a baseline against which Laura, Meredith, and Clare can gauge the extent to which childhood has changed. In this sense, the distance created between observations of childhood *today* and memories of childhood *as it used to be* works to rationalise outdoor experiences such as gardening, with the rationale becoming stronger as the discrepancies between teachers' memories and their observations of children become more acute.

This same process was identified by Raymund (1995) in a study concerning the role of adult memories of middle childhood environments. Raymund concluded, based upon an analysis of interviews from 40 adults, that memories of outdoor play spaces 'provided a basis to which today's environments can be compared in search of better landscapes for children' (p. 371). In Raymund's study, these memories served to rationalise outdoor landscapes and experiences, which were believed to foster children's 'individual development', 'creativity' and 'overall well being' (p. 372). This process depends, of course, on the existence of a younger generation with which to compare one's own experience and childhood environment.

The Role of Teachers' Observations of Childrens' Behavior

In isolation, these teachers' environmental memories are not enough to rationalise their regular use of a school garden for teaching purposes. However, when combined with their observations of the children around them — or more accurately, their *interpretation* of these observations — such environmental memories inform a much stronger rationale.

Across the different interviews, Laura, Meredith, and Clare share that the children they see every day are dependent on electronic technologies for their entertainment, spend the majority of their time indoors, have short attention spans, have difficulty with invention, imagination, and creativity, and lack core strength and fine motor skills. In each case, these observations are clarified by references to how things were different when they themselves were children and students. For example, when asked to elaborate on the difference between her own experience as a child and her daughters' experience, Meredith shares:

> *I think with all the technology now and all the ways they're connected with people now, it just seems like there's not as many kids outside to play with. You know, they [her daughters] say, 'I don't have anything to do.' Well, not anymore, they're in college. They were always saying, 'There's nothing to do out there.' We just made stuff up. I mean, if we didn't have anything to do we'd invent something to do. I don't understand that. I don't know what it is.*

Here, Meredith shares her observation there are 'not as many kids outside to play with' and she relates her observation to 'all the technology' now available. She is perplexed by

her memory of her daughters' struggle to 'invent' things to do when they were children, an observation made more poignant by her own memory of how effortlessly she and her friends 'made stuff up' while playing outside. There is a deep sense of loss here. What has been lost is not simply the opportunity for Meredith's children to experience outdoor play but the opportunity to gain an *inventive disposition* that such experiences are believed to afford. Similar to the participants in Francis' (1995) study of adults' relationships with their gardens, Meredith grieves for her children's 'missed experience' (Francis, 1995, p. 189).

Participants also draw clear connections between early outdoor experiences and creativity in the classroom. In the following quote, Laura shares a childhood memory of dramatic play outdoors, relating this memory to observations of her students and her memories of school:

> *We [she and her twin sister] were pretending like we were astronauts in outer space. We had a mission, and we were outside in the dark pretending like we were on a planet and we were looking for something with our flashlight and, you know, and like, something in particular we were looking for. I don't think kids do that anymore because when you ask them to write a story about something, a lot of them have a hard time coming up with, you know … that would have been … that was just in our own imagination, something we did on our spare time, whereas these days, you know, you ask a kid to write a story and they have to have a graphic organiser to get it all organised because they can't think of these things themselves, you know. But I don't remember that when we were a kid. We got a piece of paper and they said, 'Write a story about this.' And now you really have to structure it.*

Here, Laura suggests that the activity of 'pretending' to be astronauts contributed to and expressed her and her sister's 'imagination'. She doubts that kids 'do that anymore'. Part of her evidence is her observation that her students have trouble creating ideas in the classroom. In her memory, this imaginative work was relatively easy, 'something we did on our spare time', and we are reminded of Meredith's memory that she and her friends 'just made things up' when they were young. Laura recalls that when she was a student she simply 'got a piece of paper' and wrote a story when asked to do so, whereas her students now require 'a graphic organiser' and other support structures. In another section of this same interview, Laura elaborates on her students' need for imaginative supports. This time, she connects her students' creative difficulties to the proliferation of electronic entertainments:

> *And I think, you know, entertainment is easily accessible. We didn't have a DS [Nintendo game system.] We didn't have iPods. We had to make our own entertainment. I think kids are way more creative, were way more creative than they are now. You know, I see that coming out in just, like stories that they write or different things we do in here. One of the projects we're working on right now is a leprechaun catcher. And I taught them simple machines so they incorporated a simple machine in it, you know. And just being even creative in that is hard for some of these kids because they just don't have to think outside the box like that anymore. It's, you know, being, finding something to do is right there. They don't have to be creative.*

The idea that students and children today 'don't have to be creative' is a compelling one. What seems to concern Laura is that electronic technologies (e.g., iPods, game systems) have made entertainment too easy to access. Whereas before, Laura and her sister 'used to make our own entertainment', now 'finding something to do is right there'. For Laura,

the ease with which entertainment is *given* to students limits their ability and/or desire to generate ideas and experiences on their own. From Laura's perspective, students have trouble with creativity in large part because '[t]hey don't have to be creative'. Even if they did, though, there is a sense in which they would not know how.

Of the three participants, Clare is the most nostalgic about her childhood memories outdoors and she draws the cleanest lines between these memories and her observations of students' behaviour. In her life history interview, when asked to say more about a relationship she has already suggested between outdoor play and the developing imagination, Clare says:

> *I hate to sound like my grandparents, but we didn't have all the toys that they [her students] have that basically structure their play all day, you know? You kind of just, you followed your imagination, you did what interested you. But it seemed like all the kids were doing that, you know, growing up. All of my friends, you know, we weren't necessarily athletes or anything, but we would play kickball or we would play in the street, kicking the ball back and forth in the street, and we played tennis and stickball and did stuff like that. I was telling my class the other day that when it rained we didn't have really good drainage so we had these big puddles that kind of were like swimming pools so we'd put on swim suits and go out and play in the puddles. And they just, they don't get any of that. You know, they don't understand any of that good old-fashioned fun kind of thing.*

Clare's sense of a 'good old-fashioned fun kind of thing' helps her to discriminate between her own generation and that of her students. Her memories of playing 'in the street' and 'in the puddles' are foregrounded by the lack of such experiences among her students. As a child, Clare remembers a time in which 'you followed your imagination' and 'did what interested you', whereas today she believes that children have access to 'toys' that 'structure their play' for them. As is the case with the others, Clare expresses regret for something lost when childhood moved indoors: children's ability to invent things and experiences in the absence of external supports.

As these three teachers interpret a younger generation against their own memories of childhood, memories somewhat idealised and colored by nostalgia, a complex structure of feeling develops that clearly echoes Richard Louv's popular work on childhood and nature. In *Childhood's Future* (1990) and *Last Child in the Woods* (2005), Louv shares anecdotes from concerned parents which are strikingly similar — both rhetorically and thematically — to those shared by Meredith, Laura, and Clare in their interviews. For example, in *Last Child in the Woods*, Louv quotes a mother recently returned from a family trip to Colorado:

> *It was a perfect, quiet day, the kids are skiing down the mountain — and they've got their headphones on. They can't enjoy just hearing nature and being out there alone. They can't make their own entertainment. They have to bring something with them. (Louv, 1995, p. 12)*

Like the three teachers in this study (and the parents whose stories he shares) Louv is nostalgic for the childhood he once experienced, concerned with electronic technologies and their developmental effects, and compelled by the connection between time spent outdoors and children's creative potential. However, Louv is also acutely aware of his own 'childhood mythology' (1990, p. 12) — the ways in which his idealised memories of climbing trees and building forts inform and shape his social vision. While this awareness does not make Louv any less passionate about reconnecting children and nature, it does temper his pastoral tendency to use 'the "good old days", as a stick to

beat the present' (Williams, 1973, p. 12). This tendency to idealise one's own childhood as a means of rationalising outdoor experiences for others amplifies the need for further research into how teachers' childhood memories work to align school garden programs with romanticised versions of the past rather than with children's present interests and future needs (Gough, 1999a; Wake, 2008).

The Role of Teachers' Beliefs About Teaching and Learning

Although their environmental memories and observations of children serve as a very strong rationale for using a school garden regularly, these things do not necessarily imply a *pedagogical* rationale. For this to happen, the garden must resonate with each teacher's core beliefs about teaching and learning. Interview data indicate that this is the case, with each teacher appreciating the garden as a place for 'hands-on' and experiential learning. Their appreciation is supported by Sebba's (1991) theoretical and empirical research, which confirms the sensory qualities of children's experience with nature, and by research within environmental education that suggests the school garden as an ideal site for facilitating such experiences (Gaylie, 2009; Judson, 2010; Smith & Mostenbrocker, 2005). In many places in the interviews, these teachers position the garden in opposition to a more 'traditional' education represented by textbooks, lectures, papers, pencils, and desks. Their experience confirms the potential for a school garden to represent, for teachers, an alternative to the trappings of modernist educational practice (Thorp, 2006; Williams & Brown, 2012).

A school garden can also serve conservative purposes. For Meredith, the garden is the one place where the practices she feels most strongly about remain safe from administrative control. Central to her understanding of this purpose is her memory of a field ecology class during college, a class which fostered in her a love for natural science and made her more interested in alternative approaches to instruction, something she was not introduced to in elementary or high school.

> *When I was in school, I don't remember ever being able to do experiments and things that I try to get my kids to do. I just remember reading from a textbook and thinking it was hard. That's why the gardening program is important to me, because I want them to not read from a textbook. I want them to be interested and see things and wonder about them.*

Here, Meredith describes the garden as a place where students can 'be interested', 'see things,' and 'wonder', opportunities and experiences which 'reading from a textbook' does not support. Her suggestion that educational experiences set in nature facilitate students' wonder and engagement is supported by recent literature in environmental/ecological education (Judson, 2010; Williams & Brown, 2012). In the following quote, Meredith describes how the garden helps her to resist administrative pressures to limit science instruction in favor of math and reading, the state-tested subjects:

> *They [administrators] have to have math and reading. And I just got done taking all these science courses, so I'm so excited about labs and stuff, and I barely have a half hour a day to do science. And I'm really into the inquiry-based science and labs and hands-on things, and the garden gives me that chance. And I feel like they won't take that away from me.*

Meredith appreciates the garden as a site for doing 'inquiry-based science' and 'hands-on things'. In this sense, the garden serves for Meredith as a reservoir for some of her most valued practices, one of few remaining places where she can be authentic to her deepest beliefs about teaching and learning. The garden gives her 'that chance' in ways that her indoor classroom may not.

For Laura, outdoor and indoor classrooms works more in concert, with what happens indoors giving meaning to what happens outdoors — and vice versa. Laura wants her students to *appreciate* the school garden experience, something she believes is more likely to occur if what happens in the garden is closely connected with what happens indoors:

> *When we go out there they, you know, they understand more. I think if they went out there and they felt like it was a waste of time, you know, maybe they wouldn't appreciate it as much as when they can incorporate the learning we're doing in the classroom with it.*

Here, Laura describes how the garden experience helps her students to 'understand more', but she recognises the risk of the garden being a 'waste of time'. She manages this risk by helping her students to 'incorporate' their classroom learning into the garden experience, which leads them to 'appreciate' garden time. Her support for the garden program is also informed by her observation that this hands-on experience helps students not served by traditional classroom work to feel successful:

> *I see the kids that struggle in the classroom, you know, with paper and pencil work or, you know, thinking, or a lot of kids — the kids that maybe can say what they want and what they know but can't write it down — can be successful out there. Kids that need to touch and feel and be hands-on can be successful in the garden. A lot of those kids that do struggle in the classroom need a hands-on experience. They need to experience it and feel it and touch it. And so that's what the garden is.*

In this quote, Laura echoes Meredith's understanding of the garden as a place 'hands-on' teaching and learning. She uses sensory language when describing the garden as a place where 'kids that struggle in the classroom' can 'be successful'. Her language includes references to 'touch' and 'feel' and the 'hands-on experience' of gardening. Like Meredith, Laura draws a distinction between the garden experience and the more traditional 'paper and pencil work' that characterises the indoor classroom. The effect is to foreground the unique and 'hands-on' quality of the garden experience.

As with Laura, Clare finds meaning in the fact that the garden allows her students to express themselves in alternative ways. For Clare, this expression helps counter some of the more restrictive aspects of education indoors. In regards to her students:

> *They're creative in general, but I think when they go outside, they become, you know, more … they're just freer. I don't know if it's the fresh air, if it's just space to move about, if it's actually what they're learning about. I see them sort of being freer, and there's no desk, there's no pencil. I mean, they're just kind of out there and they're learning. They're doing thing with their hands.*

As is the case with the other two teachers, Clare understands the garden as a place where students are 'learning' while 'doing things with their hands'. According to Clare, students are 'just freer' when they are outside. Like the others, she understands this freedom by referencing 'pencil' and 'desk' — two master symbols of the traditional classroom. For Clare, the absence of these things foregrounds the value of the garden experience.

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Conclusion

Making Productive Use of Teachers' Nostalgia

As the findings of this study suggest, a complex combination of internal processes and products serves to rationalise teachers' regular use of a school garden. For environmental educators who cooperate with teachers on garden-based projects, these findings may help them understand a teacher's role, including teachers' enthusiasm and/or disengagement. In addition, they should not be surprised to find (or feel) a nostalgia that serves both psychological (private) and sociological (public) functions (Wilson, 2005). Nostalgia appears to be the primary affect associated with the cultural logic of school gardens (Enfield, 2000). This is this study's central and most interesting finding.

Guided by recent work in sociology and cultural studies, I interpret this nostalgia as being productive, utopian, and restorative rather than regressive or reactionary — a way of returning to the past in order to make better sense of the present — a necessary antidote to the modernist discourse of progress (Boym, 2001; Pickering & Keightley, 2006; Wilson, 2005). For primary teachers such as Laura, Meredith, and Clare, recollecting a better past, a time that offered children opportunities and experiences that no longer exist, may represent a way of sustaining their identities in an educational institution marked by constant changes in curriculum, standards, and teacher evaluation systems (Wilson, 2005, p. 82). In this sense, nostalgia is an affective dimension of teacher resistance, similar to the resistance noted by Thorpe (2006) in her study of primary garden teachers, a resistance grounded in the pace, patterns, and possibilities of the school garden. Considered as a desire for 'slow pedagogy' (Payne & Wattchow, 2009) this nostalgia reflects a search for stability amid 'the velocity and vertigo of modern temporality' (Pickering & Keightley, 2006, p. 922). Although research related to nostalgia is rare within the field of environmental education, Neilson's (2010) study of the urban agriculture movement in Portland, Oregon demonstrates how narratives of nostalgia can be traded as cultural capital, empowering collective action. If nostalgia is central to the school garden experience, we will need additional research to disentangle its many meanings. Nostalgia is complex, a slippery slope. Garden-based nostalgia can just as easily evoke the 'ideology of small towns and rural regions' (Bushnell, 1999, p. 81), particularly in America, where gardens are closely tied to a pastoral ideal (Marx, 1964/2000).

Just like the three teachers who participated in this study, and teachers with similar stories, the field of environmental education has a complex relationship with the past, including its own. Although many — if not most — environmental educators are involved in resisting the modernist agenda, our narratives of the sustainable society depend upon a complex mix of *pre*-modern and *post*-modern themes. A return to previous times is implicit in all efforts to 're-unite' children and nature, including environmental education projects. And given all the lost knowledge and skills related to agriculture and farming, it is not surprising that the school garden could become a nostalgic site, a place where childhood memories become entangled with collective memories of a pastoral ideal.

We need to reflect on these things. For those of us who cooperate with teachers on garden-based projects, 'surpassing our own histories' (Gough, 1999b) will involve attending to the *affects* and *effects* of our childhood memories — to the nostalgia that accompanies the act of remembering and to the effects of particular memories on our programs (Wake, 2008, p. 432). But this work should also involve a deep consideration for how the school garden itself — as idea, place, and action (Francis & Hester, 1992) — can reproduce visions of society that are culturally rich but no longer useful.

Keywords: school gardens, nostalgia, pedagogy, environmental education, phenomenology

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