Chapter 12
What Comes Before Participation? Searching for Meaning in Teachers' Constructions of Participatory Learning in Environmental Education

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12.1 Introduction

This chapter contributes to the debate on participatory education through examining some of the intentions and dispositions that underwrite teachers' ways of thinking and acting in educational settings. Rather than looking at participation directly, the study on which the chapter is based attempted to generate understandings of how certain teachers become disposed towards the participatory interests that are almost synonymous with environment-related education. My interest is in the assumptions and predispositions that underlie teachers' notions of what counts as participatory learning within their genealogies of context, and so this chapter explores, the aims and methods for elucidating teachers' stories of their actions within their theories of context.

12.2 Background

> Beneath the veneer of civilization…lies…the human in us who knows what is right and necessary for becoming fully human:…a rich nonhuman environment…the discipline of natural history…the cultivation of metaphorical significance of natural phenomena of all kinds…. There is a secret person undamaged in each of us, aware of the validity of these conditions, sensitive to their right moments in our lives. (Shepard 1982:39.)

Environmental education is more a philosophy than a curriculum area such as science or social studies. Teachers who have somehow acquired the 'ethic' always seem to find ways to incorporate environmental education into their programmes

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of study. Contrary to official stories of the teacher-proof curriculum, environmental education occurs because teachers believe it is important to the education of young people in their care (Hart 2003). Our research group[1] has traced teacher's participation in environmental education to certain core values, such as respect, caring, and responsibility, and these seem to be associated with early-life history. Some teachers reflect them in their personal and social values to the extent that they incorporate environmental ethics as part of their personal practical theory; in other words, this philosophical identity is manifest in their educational practice.

In attempting to understand the precise nature of the environmentalist part of teachers' discourses-practices, we have adapted our earlier narrative-based inquiries in pursuit of a more nuanced genealogy of teachers' experiences within their more immediate historical contexts. Given recent developments in research on learning that implicate its socio-cultural dimensions (Cole 1996), our focus now incorporates activities that include the generation of memory maps, autobiographical accounts, and sense of place encounters. These have proved useful in helping participants link their personal experiences to their pedagogical beliefs and practices. This narrative-based adaptation to our work represents an attempt to explore teachers' theory/practice connections as genealogical tracings of those pedagogical ideas that appear to have helped them to reflect on the origins of their participatory practices in environmental education, as the socio-cultural dimensions of their own learning (see Gutiérrez and Rogoff 2003). This chapter elaborates how and why we reframed our focus, and discusses a short piece of textual evidence that illustrates this shift.

12.3 Conceptual/Contextual Frames

To be an environmental educator is to understand what it means to know based on a participative relationship with the world. Although educators often discuss knowledge as cognition – as something that can be acquired by individuals and exists 'inside the head' – ideas about knowledge have changed in line with the evolution of social theories, initially based within a philosophy of knowledge grounded in orthodox science. For example, Reason (1988) has identified three interrelated aspects of an ontological shift in thinking about education that implicate participation, critical subjectivity, and knowing in action, as constitutive of a postmodern view of knowledge. Whilst not achieving the status of a new orthodoxy, such a shift has created openings for ways of knowing based on broadened notions of consciousness and a world view that encompasses a variety of less certain and more dense webs of knowing, in representing human social interaction. Sterling (2003) captures the spirit of this shift in forms of thinking by distinguishing between 'learning within education' and 'learning through education'. This implies an epistemological change towards more participatory modes of knowledge generation,

[1] I use the words 'we' and 'our' to refer to our team of research associates that included Ann Camozzi, Susan Gesner, Christine Robertson, Loraine Thompson, and Judith McPhie at various stages of the research. The Social Sciences and Humanities Research Council for Canada funded the work over a period of approximately ten years.

and is tune with the participatory learning found within the historical rhetoric of much environmental education.

It may be difficult for many of us living in industrial societies and wondering what it means to be entering a postmodern age to imagine how we can experience participatory, empathetic, responsible, and primary meanings to our lived experience. Heron (1996: 181) argues that such meanings are 'both prior to and consciously underneath and within our use of language', where language is 'secondary meaning', and remains a 'partial and incomplete transformation of our primary meaning'. Such 'participatory consciousness', set aside for a hundred years for ideological and political reasons (Berman 1981), remains a fundamental part of human intersubjectivity with nature (see Abram 1996). The term captures the work of 20th-century philosophers and educators who seek to redress a scientifically narrow and outdated Cartesian epistemology and to engender embodied ways of knowing that reflect new understandings of human learning and meaning-making. In Heshusius' (1994) terms, participatory consciousness is an awareness of a deeper level of kinship, a way of being with others, and the world, facilitating more profound understandings of others and the landscapes within which they reside.

To a large extent, this consciousness has permeated the work of environmental educators over the last decade. The idea that there is more to teaching than observable behaviours is based on assumptions other than those relating teachers' competence and effectiveness to individual performance. Our work with Canadian teachers who incorporate environment-related activity within their elementary school classes has led us to attend to the relationships between their actions and their perceptions, understandings, beliefs, and values. We think it is reasonable to view teachers' conceptions of their professional work in terms of what they believe is good for 'their' children, as well as what seems to them to be educationally effective. So we have questioned how their beliefs, attitudes, and conceptions are connected to their identities as teachers (Sfard and Prusak 2005). Because identity can be thought of as created and recreated in interactions with people, we explored the role of relationships in shaping the dynamics of their ideas and practices (see Bauman 1996; Holland and Lave 2001; Roth 2004). Thus, for complex reasons amid the tensions of structure (as social 'givens') and agency (not in a unified sense but as something life history gives them to make sense of themselves as multiple subjectivities), we have explored how, in essence, environmental education theories have become pedagogical practices.

Evidence of a fundamental agentive dimension to teaching is grounded in research on teacher's thinking (see Day *et al*. 1993) and in life history research (see Goodson 1992). As a shift in focus from the search for greater 'skill' within educational research to the search for 'will' (Sarason 1983), understanding how the discursive production of teachers' identities provides frames for their practices accrues value, as it can expand the research frame beyond largely anthropocentric interests rooted in multiple levels of social relationships to recognise other agents and agencies, e.g. from the 'more-than-human' world. Using Clandinin and Connelly's (2000) narrative investigation of teachers' implicit theories, we have explored how images constructed from childhood experiences could be viewed as culturally endorsed, implicit, taken-for-granted values and beliefs that connect

directly and dialectically with teachers' pedagogical practices. However, studies of personal, professional knowledge (Elbaz 1983, 1991), professional development (Louden 1991), and attempts to characterise teaching as moral or creative (Olson 1992; Woods and Jeffrey 1996) provide evidence for what Bruner and Haste (1987) describe as a quiet revolution occurring within learning research and developmental psychology. So we have now incorporated into our work ideas that make a case for investigating teacher's learning through interactions located in historical and sociocultural contexts as a way of making sense of social processes. This is a more complex conceptualisation of identity beyond intrapsychic and social dimensions.

The idea that, in certain situations, learning was more likely to result from participation in social learning experiences, such as young girls learning 'weaving' skills from close observation and intent participation (Rogoff *et al*. 2003), has begun to transform learning theory (see Bransford *et al*. 2000) in ways that directly tie participation to the development of social consciousness and social responsibility (see Moore *et al*. 1985; Wenger 1998). However, this recent propensity to implicate personal qualities in teaching decisions/practice with the social participatory nature of learning is troubled by social theory that provides explanations of social determination of personal identity that leave little room for agency. For example, Foucault (1981) and Bourdieu and Wacquant (1992) show in their different ways that personal identity and action are inevitably conditioned by the operation of power in society. Although issues of identity and structure are far from being settled, we found that our interpretation of environmental education practice was strengthened by our attempt to envision the development and contestation of teacher's identities in terms of issues of power.

So, while we began by exploring 'reasons' for teachers' pro-environmental professional actions in terms of personal qualities as 'latent' awakenings of significant life experiences, our current interest is in the actions of teachers in terms of what MacIntyre (1981) might call 'traditions' or Bourdieu (1984) fields of choice within relational (social) space. Viewing teachers as being aware of arrays of possible choices (and actively choosing participatory environmental education activities) and, in essence, rejecting other possibilities, we can look for the missing links by which they affirm their affiliations and make distinctions that come to constitute their professional identities. The process of understanding such complexity is messy because the meanings of such choices may change over time, they may even contradict themselves on occasion and are often tacit or unconscious parts of teachers' thinking. Thus, inquiry into reasons for particular actions being situated and historical is tenuous at best. However, assuming that actions and choices are not completely random and whimsical, it seemed reasonable, following Taylor (1989) and others (see Noblit and Dempsey 1996), to look at tendencies historically and as embodied and generated by 'moral sources' and other resources (personal and social) that inform a teacher's creative articulation of such choices within the structural/power constraints of the profession.

Our interest in the historical agentive dimensions of teaching environmental education as participation attends to the fact that people are the way they are

because of their past, but it is also more than this. For example, our work has been informed more recently by well-constructed arguments about learning through participation in meaningful experiences that are identity-forming, meaning-driven, and socially situated (see, for example, Solomon *et al*. 1992; Rogoff *et al*. 2003). Developmental learning research affirms earlier findings in disparate areas of social consciousness, political socialisation, and moral education, suggesting that participation is grounded in one's sense of larger meaning and purpose, one's identification with morality, and that these emerge early in childhood (see Thomashow 1995; Berman 1997; Hutchison 1998). If, however, we begin to think of biography as a mixture of personal biography and social biography, we can then examine life-history research (see Louden 1991; Goodson 1992) in terms of how biography affects the practice and professional identities of a teacher in both senses. Thus, Poulson's (2001) concern that researchers focus on teacher's learning as a means of understanding teacher's actions led us to find ways of looking at where in teachers' learning experiences their implicit theories have been generated and developed throughout their lives, as well as at how their professional choices were exercised in relation to relatively intractable social constructs, including cognitive and sociocultural (affective) frames, and institutional structures (i.e. relational positioning in social space – see Bourdieu and Wacquant 1992).

Sociocultural frames have also been useful in our examination of the influences of professional mentors and colleagues across the generations because they provided a focus on the social nature of learning (see Cole 1985; Smagorinsky 1995; Ball 1997). A neo-Vygotskian perspective suggests that learning involves the use of cultural and symbolic 'tools' such as language, texts, and experiences to develop understandings of subjects (such as environmental education), while engaged in particular activities within particular environments. Our focus in talking to teachers, as students of educational professionals and as mentors for their own school students, emphasised this generative social/contextual nature of learning in producing new understandings that themselves acted to reshape the original symbols (images, concepts of environment, issues) as organising frames for their own thinking (i.e. beyond a seemingly intractable moral grounding). Thus, teachers' learning may be morally grounded but it is also contextually bound, shaped by meaning through their participation in experiences past and present, in particular situations (i.e. natural or urban settings), and as configured by significant people (i.e. mentor-types) in the setting/location/space.

In our genealogical tracings, Russell's (1997) notion of 'activity networks' has also helped conceptualise ongoing, meaning-directed, yet historically conditioned tool-mediated interactions between teachers and their students. In our inquiries, these interactions are centred around exploring certain experiences in post-secondary courses of study and in professional encounters, often in school and university contexts (though not always located on campus), within the contexts of school and classroom cultures of pre/in-service teachers. Such contexts can be thought of as networks or systems of activity or participation (see Sterling 2003), where certain beliefs, ethics, values, and assumptions are assumed and enacted. Accordingly, our teacher-participants in the research came to think about teaching and learning in relation to

participation networks in which they found themselves as learners, learning 'through' social interaction where cognitive dimensions of learning are intimately interconnected and dependent on the society. Frames of sociocultural theory (Vygotsky 1978; Cole 1985; Wertsch 1991; Smagorinsky 1995; Wertsch *et al*. 1995) thus informed both our data collection and 'analysis/ communication'.

12.4 Researching Indentity via Narrative

Let us suppose for a moment that a university-based teacher-educator and a small group of pre-service (or in-service) teachers share a predisposition, perhaps an ethic, which can be characterised as ecophilosophical, ecological, or environmentally sensitive. Suppose that such a shared ethic, although messy, full of contradictions and only partially coherent and certainly not unitary or comprehensive, consists of some ideas, images, and predispositions that can be used as tools to investigate learning. As Grumet (1987) says, to investigate this kind of interactive process we begin with narrative. We do so because we are asking people to 'tell identities'. These tellings may be identified as a set of reifying, significant, and endorsable stories about a person. According to Sfard and Prusak (2005), such stories, even if individually told, are products of collective storytelling. We were therefore led to consider a more complex process of autobiographical excavation as a way into understanding the 'landscapes of learning' (Wilson 2002).

Let us now further suppose that if we view integration between teacher and students as a learning process, and if learning implies becoming a different person, then it involves the construction of identity (Lave and Wenger 1991; Wenger 1998). Such broadening of perspectives about learning might implicate educational practices in new ways of learning/knowing based, for example, on different considerations of what counts as learning, legitimate experiences, or educational settings. Such a scenario, if appropriately framed in terms of narrative identity, for instance, gives new meaning to the value of narrative inquiry as a conceptual bridge between identity and sociocultural dimensions of learning. Sharing an ethic means sharing some agency – through the experience of identity as a way of being in the world (Wenger 1998:151).

Viewing our narrative work with teachers as something more than their own stories of who they are, we attempted to link teachers' identities as environmental educators (even if only part of their identity) to communicative activity beyond self-dialogue. We attempted to get beyond claims about teachers' stories as mere windows into teacher's thinking or representing their essences, to a view of their thoughts and actions as discursive constructs that are collectively shaped (even if individually told), and although they may change according to the authors' and recipients' perceptions and needs, accessible to researchers. This is not to say identities do not originate in daily experiences (see Wenger 1998), but that they operate as discursive counterparts of one's lived experiences – that is, as visions and memories of those experiences rather than the experiences themselves (see Sfard and Prusak 2005).

Although we remain uncertain as researchers about what we can learn from what might be termed genealogical tracings of ideas, trajectories of relationships, or even

a sociological flow of ideas, we think that we can draw on what is known about how narratives may interact with one another beyond personal stories, narratives of experience, and personal life histories (see Clandinin and Connelly 2000). We were looking for social/cultural learning connections as if they could be found. We believed that the meanings transfered through such symbolic and cultural tools as coursework experiences, writings, drawings, stories, and images shaped by purposes, situations, or contexts (see Kagan 1992; Richardson 1996), were somewhere to be found in the social relationships, the relational spaces and places of interactions, and the conversations over time about the environment, sustainability, or ethics. As Sfard and Prusak (2005) say, identities are the product of discursive diffusion: our proclivity to recycle ideas of others even if we become unaware of the origins of these texts.

In spite of our doubts about the possibility of understanding the personal/social construction of meaning through relationship, we began by creating family case studies centred around active environmental education, teacher education programme components, working to interview professors, their own mentors if possible, and several teachers who indicated through their subsequent teaching work that their environmental education experiences had helped to develop, nurture or awaken their desire to teach environmental education. The idea for this strategy was based on the notion that those stories that make it into a teacher's identity depend on the significance that teachers/students attach to the voices of others. Significant narrators, as the most influential voices, are carriers of those cultural messages that will likely have the greatest impact on one's actions (Sfard and Prusak 2005).

Our interviews were conversational, interactive, of a historical (life history), autobiographical and genealogical nature. We pursued teacher-generated stories, anecdotes and ideas through conversations and publications of mentors that served to articulate their philosophical bases. We assumed teachers' discursive practices were traceable to many sources, particularly in teachers' education where many teachers had identified significant mentors in previous studies. We viewed our mentors as the 'heroes' of these narratives because they engage routinely in the elaboration of thought about discourses-practices in environmental education that may be influential in the generation of another's thinking, by actively, interactively, penetrating existing ideas. We assumed that these utterances and words would not have been effective were it not for the power of relationships with significant others to contribute to teacher/student narratives about themselves (perhaps as tacit co-authors of their own identities). In other words, a story was never just a story but a statement of belief that could take on a life of its own beyond itself in the work of others, or as Goffman (1959) puts it, as 'presentations of self in everyday life'.

It was anticipated that the narrative evidence provided here could capture aspects of our attempt to access narrative identities and penetrate social consciousness across two or three generations. Our tracings were in search of what Bakhtin (1981, 1999) calls 'internally persuasive discourse' – those ideas about thinking and acting that have engaged us from within and become part of us, part of our being. We think that some of these ideas may have been products of a discursive diffusion or narrative osmosis (Gee 2001) with enough power to contribute to one's sense of identity, that is, as stories that somehow speak to us so powerfully that we cannot continue our work without them. We also recognise that not all such ideas or stories are simply

accepted as elegant or immaculate, but come to us as we critique, modify, adapt, or reject the ideas of our teachers. Nor do most of us propose our ideas to students in ways that anticipate anything other than engagement in them as complex possibilities, sensitive to differences of many kinds. It is not unreasonable to conjecture that learning occurs where shared knowledge is exchanged interactively as one's values are exposed, critiqued, and changed within the relative safety net of collegial relations. Critical stories, those that shake our sense of identity, could even make one feel as if one's whole identity has been changed (Sfard and Prusak 2005).

On the one hand then, our inquiry strategy was epistemologically individualist, as one that regarded teachers' ideas/practices as theory-guided, experience-based, and critically reflexive, as participants themselves struggled to learn about their own tacit 'drivers' (Carr and Kemmis 1986; Kemmis 1998; Kemmis and McTaggart 2000). On the other hand, our method was epistemologically interactionist, acknowledging personal, practical theory and experience as valid ways of knowing as they implicate hermeneutic, participatory processes. Blending narrative autobiography with genealogy represented our attempt to link narrative notions of identity to the activity of communication as discursive or reflexive. It also represented an attempt to address the role of narrative diffusion in learning. Framed ontologically, our study was based on the philosophical premise that people who come to know interactively enter a kind of hermeneutic cycle of learning. That is, they come to understand complexities in their own thinking through dialogue, but particularly the sort of dialogue that maintains space for uncertainties, inconsistencies, and indeterminacies across multiple subjectivities (see Beyer 1988; Lave and Wenger 1991; Krechevsky and Stork 2000).

There is always a tension, it seems, between teachers' intuitive, remembered ways of knowing manifest in their agency in classrooms, and those discourses of culture and education that form the context of teaching (Stevenson 1987; Gilmore 2001). Our inquiry was more about (re)storying and identity-building through interpretation of philosophies of environmental education teaching as participative, than the social dimensions of a larger learning process. How else can one search for those ideas that mattered most – as a sociological flow of lasting impressions now manifest as 'can't not do' practices? How do researchers help teachers 'see' differences they can make in the lives of their students? Narratives that constitute one's identity, being an important factor in shaping one's actions, seem useful in research even if they communicate one's experiences only as well as human words can tell (Sfard and Prusak 2005).

12.5 Tracing Teacher's Identities as Stories Coming from Different Narrators

In a case study involving a university professor (Cynthia[2]) and three of her former students (Whinnie, Eunice, and Neeson), we explored how their interactions seemed to have generated some lasting meanings for each of their identified lives

[2] Pseudonyms have been used when participants are referred to by name.

as teachers. We have illustrated, as excerpts from this case study, how the narratives of one person appear to have woven through personal narratives of another. Because this sense of connection in relationship was difficult to represent textually, narratives were focused on the significance of various kinds of interactions where participants derived meaning for their orientation to and participation in environmental education. These passages capture small portions of text that seem to represent connections to both Cynthia's mentors and her students. Obviously, the narratives, as life stories, are more complex than these testimonials can express, as we strived to achieve as proximate a relation as possible to what really is the case of that discourse (Chawla 1994).

We begin with one teacher's (Whinnie) description of how her parents influenced her ideas about individual responsibility and social justice through their own participation in their Canadian community.

> They (my parents) were very vocal – very interested in their community, in politics. Always they would tell us to stand up for what you believe in…the whole family would attend protests and marches in the streets. In one such incident, Dad used his umbrella to tear down a sign he didn't like. His picture was in the newspaper and he showed it to us proudly.

Neeson related incidents of his participation in the TREK programme – an outdoor programme of integrated environment-focused studies becoming increasingly popular in Canadian high schools.

> There was lots of outdoor experience – nature was experienced and appreciated as a place of refuge, as an important protector of human life…it can be very empowering…but it needs an ongoing component so students don't get dropped back into that other life without support.

> There was a special teacher. He always raised issues of social justice…and the importance of spiritual development, which I ignored when I was a high school student. He engaged his students in social projects and got them involved in the community.

In university, Eunice said she 'ended up' in geography because it had a landscape and an outdoors component. She grew up on a hobby farm with parents who were 'wonderful models of love of the outdoors'. She was politically active, she says, particularly in the area of social justice, but returned from South Africa (where she went after completing her geography degree) because:

> [W]orking on justice issues while not working on environmental issues seemed to be problematic – missing a huge piece of the fit…without clean air and water all struggles to lessen poverty, racism, would be for naught in terms of our human ability to survive.

Each of these teachers gravitated toward Masters-level studies in environmental education – 'it was a moral imperative' for Eunice. Neeson emigrated from community education and Whinnie had enrolled in a Masters programme when she took an environmental education unit and met Cynthia there, her professor and subsequently one of the significant influences in her life as a teacher, or so it seems.

Cynthia's early landscape was an industrial town, but she remembers the 'Clean up America' campaign.

> My father loved nature, loved to be outdoors and would take us hiking. Though he wasn't an environmentalist, he bought me a copy of Thoreau; he affirmed my own passion…somehow I equated the notion of citizenship with looking after…environment.

One of Cynthia's mentors was a social studies teacher who organised a student club to fight pollution. He was able to affirm her early sensitivities to environmental degradation and to provide her with some of the tools for social action. She recognised him as her inspiration for the commitment and effort required to make a difference – something she has taken seriously in her life as a professor.

From her own educational experiences, both formal and informal, she developed a strong sense of personal responsibility. This principle guides her personal participation as well as her professional sense of commitment. Arising in childhood, Cynthia attributes her active moral stance to her philosophy professor who challenged dominant social values, and to authors such as David Orr (1994), who advocates responsible citizen participation as environmental stewardship.

We ask, in our role as researchers, whether it is possible to assert that an influential teacher has made a difference in the moral and ethical stance taken by a student? We ask whether this is possible, without coercion or indoctrination, but rather through creating conditions for them to find their own voice? We also ask, in this role, whether our descriptions of these influences can capture such ephemeral connections, certainly not as explanations, but at least as plausible interrelations of interactional learning?

Always aware and wary of the power embedded in her role as a teacher, Cynthia's postmodern sensibility can be seen repeatedly in her struggle with the notion of 'empowering' her students. She challenges herself and her students to ask some hard questions of themselves. She urges her students to develop their awareness and understanding of their personal landscape; she speaks of citizenship, of connections between personal awareness and personal commitment, but there is no question that it is her view that environmental education is foundational to all learning and all subject matter. She states this view many times in the course of our conversations:

> I would like to see teachers modelling and teaching stewardship. Get the kids outdoors – have them looking, drawing, writing, becoming aware and appreciative…to feel a connection to place, to what causes peace and what causes disjunction…to understand that the way we do science is weighted with the values of society.

Her students describe Cynthia in terms of her intellect, her caring, and her emulation of mutual respect.

> She would share her opinions and values but never made you feel that they were the only ones…just hers.

> She encouraged us to know our own voice, to explore our individual beliefs and values. Change happens inside first.

Cynthia's themes include the need to construct knowledge of one's personal landscape in order to understand the social construction of knowledge on a path to responsible citizenship (which involves environmental stewardship and a measure of humility toward nature).

> So we wondered what we might find in the students' practice, their ideas and values in action, some of which might be part of an intergenerational flow of ideas that somewhat mysteriously work to inform environmental education on the ground.

Like Cynthia, Neeson sees environmental education as:

> [D]irect experience in the environment…whatever landscape we inhabit is where to begin. We first need to study and participate….

Whinnie is teaching elementary school where, she says:

> It is important for my students to have concrete experience of exploring the environment they live in…then they have a reference point to extend out to other parts of the country and the world.

> My students do opinion pieces every week. First they read…then write…. They're learning to develop their own voice…to explain their thoughts and I'm trying to get them to think about why they think the way they do…where ideas come from.

Eunice, as education coordinator for a local non-profit organisation, believes that…

> Educators need to recognise that mental health and human humility are essential to a healthy and spiritual way of being. The school garden is one way of making that connection.

Her students already cared about the environment, already wanted to make a difference in the world when they came into Cynthia's classroom. However, under her guidance, they expanded their awareness and increased understanding of their own potential – a support Cynthia attributes to her professors (at the University of Windsor). The importance of reflexive work is echoed in both Cynthia's and her students' work, just as she was asked by her philosophy professor to examine her opinions and values and to attend to critical thinking. These are moral positions, it seems to us, operating as discursively produced identities that are integral to action and participation as environmentally responsible citizens. Summarising their own reflections on investigating learning as a culturally shaped activity, Sfard and Prusak (2005) endorse an increasingly argued conviction that the narrative turn in identity work will increase the researchability of educational phenomena. Questions about agency would become questions about discursive practices, as identity-building is equated with storytelling.

12.6 Stories as Precursors to Participation/Action in Environmental Education

Throughout our work, it has been clear to each of us that central issues in constructing those narratives for participants in our study include environmental influences through the life stages, particular sources of influence, as well as personal ways of knowing the environment. As Bonnett (2003) suggests, any thorough exploration of the idea of environmental education leads us to the metaphysics of education, that

is, those motives that are working themselves out in our existence and thus participate actively in shaping our lives in fundamental ways. So whilst we mention certain influences at various stages of life, there seems to be something more complex about one's sense of the teaching of environmental appreciation than can be explained away by interpersonal, academic, and situational influences. As one of our research team expressed this rather common finding, some people have something within them that ties them to the natural world. This inner will cannot be explained easily, in terms of factors or influences.

In our intergenerational tracings, we think that we were able to see many ways that teachers participated in experiencing, perceiving, and knowing the world, involving intellect, the senses, emotions, and spirituality. Some people created experiences that were enabling, or emotionally infectious. For others, experiences in the environment occurred more spontaneously, for example, during outdoor excursions, or as part of planned educational experiences. And for others still, books and various media challenged teachers to expand their thinking or reflect on their emotions. Whether nature or sense of place itself fosters awareness, and perhaps, appreciation, the key move in our inquiry was to begin to see teacher's practices in terms of their identities rather than treat their stories as windows to another entity that stays unchanged.

If we could trace actual images of ideas that seem to cross people boundaries, we might want to disrupt some conventional notions of learning as a process of human cognition, and invite discussion about alternative conceptions – constructive, situative, and culturally critical. We might want to modify such notions to include more on the role of emotion and desire in learning. In all of this though, it seems to us that action/participation remains the most crucial part of learning in environmental education. While the origins and flows of ideas have proven elusive, there seems little doubt that some of our deeply held values are grounded in active participation. Some of what happens in classrooms is intellectual, but some is interpersonal, emotional, and meaningful in other ways. We believe that we are just beginning to understand how personal/social identities are implicated in participatory educational practice. Our methodologies seem to reveal the importance of locating ourselves in the world and understanding our values and beliefs and the ideas and actions that we can identify in ourselves. Yet, they remain inadequate and, in a sense, discomforting, precisely because they trouble meaning and motive rather than assumptions about curriculum and implementation. Unless we begin to address certain issues of methodology, such as the role of narrative as a starting point for collaboration, and genealogy and (auto)biography as a process of deconstructing research 'on' participation, we may continue to rely on more 'measured' approaches to participation as the route to change within environmental education. Perhaps good mentors simply provide interference that helps us truly attend to our intentions and conscious perceptions of direct experience. Where could we find more of these people who promote interference rather than solve our problems? It seems that mentors like Cynthia and her teachers are those who work on the self and on one's ability to participate meaningfully in practices of one's choosing, but how? We think that we have just begun to learn to approach complex narratives of

inquiry as concepts such as participation demand. We have encountered narratives' incessant co-moulding (see Sfard and Prusak 2005) as an intergenerational flow of stories that are collective products, as pivot points between individual and social aspects of learning, yet we do not yet understand much about why individual actions reveal familiar resemblances.

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