Co-Creating Metaphor in the Classroom for Deeper Learning: Graduate Student Reflections

Ashlee Cunsolo Willox, Sherilee L. Harper, Dawson Bridger, Stephanie Morton, Ariella Orbach, and Silvia Sarapura University of Guelph

Metaphors are pervasive and accessible thinking and learning machines that have the ability to disrupt and transform our patterns of thought. While much has been written about metaphor as a pedagogical tool, the potential learning opportunity that arises when students co-create metaphor within the classroom as a way to make sense and meaning of the curriculum and co-discover knowledge is not discussed. Through the example of six graduate students co-creating a metaphor of capacity-development-as-fire, this critical reflective paper describes an emergent learner-driven process involved in utilizing metaphor as a learning activity to promote deeper and long-lasting student learning and knowledge acquisition.

The construction of metaphors—two dissimilar and often disparate terms or concepts placed together create newness and understanding—is an incredibly powerful thinking machine and lies at the heart of what it means to be human (Lakoff & Johnson, 1980). Through the paradox of being strange, vet familiar, metaphors can perform an operation on our cognitive processes, and, as such, they can disrupt and transform our ways of thinking. They can introduce theory and terminology and elicit understanding where none previously existed and, in so doing, produce something that promotes a deeper connection with the ideas within, and extrapolated from, the metaphor. According to Lakoff and Johnson (1980, cf. 1999), because metaphors are so deeply rooted in our experiences and our thinking, they enable us to make sense and meaning of our worlds. Going further, metaphor allows us to continually make and remake reality with our minds (Cook-Sather, 2003, p. 949), for metaphor "is pervasive in everyday life, not just in language but in thought and action. Our ordinary conceptual system, in terms of which we both think and act, is fundamentally metaphorical in nature" (Lakoff & Johnson, 1980, p. 3). As Lakoff and Turner (1989) explained:

Metaphor is a tool so ordinary that we use it unconsciously and automatically, with so little effort that we hardly notice it. It is omnipresent: metaphor suffuses our thoughts, no matter what we are thinking about. It is accessible to everyone: as children, we automatically, as a matter of course, acquire a mastery of everyday metaphor. It is conventional: metaphor is an integral part of our ordinary everyday thought and language. And it is irreplaceable: metaphor allows us to understand our selves and our world in ways that no other modes of thought can.

This irreplaceable and foundational quality of metaphors, combined with their ability to take what is familiar and transfer it to what is unfamiliar in a way that jars thinking (Thomas Couser, 1990), is what gives metaphor its potential for transforming frames of mind and changing thought: "in the space of imagination a metaphor opens up—a liminal space, an 'in-between place which bridges the indicative (what is) and the subjunctive (what can or will be)'—the mind moves itself from one 'place' of understanding to another" (Cook-Sather, 2003, p. 949. Internal quotation from Turner, 1980, p. 159). In this sense, metaphors can be a particularly useful strategy to liberate conventional ways of thinking and/or generate new ideas (Schön, 1979; Kemp, 1999; Blewitt, 2005), for they have the capacity to educate beyond words alone (Williams, 1986; Garner, 2005). Indeed, when "properly used, metaphors...can provide a type of shorthand to help define the intangible or abstract" (Garner, 2005, n.p.), thus facilitating the learning process.

Given these properties of metaphor, and with the understanding that human thinking is metaphorical at its core (Bowers, 1993), the use of metaphor in teaching and learning environments can be a powerful pedagogical approach. Indeed, framed within the understanding that teaching and learning are "not only about transmitting knowledge, but transforming and extending it as well" (Boyer, 1990, p. 24, italics original; c.f. Mezirow, 1991), metaphors—and curriculums which support and encourage their useprovide rich and deep learning opportunities for students. For example, studies have discovered that in the classroom, metaphor can enhance student learning through the increased retention of material by increasing personal resonation with curriculum and by assisting with the understanding of complex ideas and topics (e.g. Thomas Couser, 1990; Blewitt, 2005; Garner, 2005; Greenwood & Bonner, 2008; Serig, 2008). Given these benefits, metaphor has enjoyed a long history as a teaching technique in numerous disciplines in institutions of higher education (Thomas Couser, 1990; Blewitt, 2005; Garner, 2005; Greenwood & Bonner, 2008; Serig, 2008). As Garner (2005, n.p.) argued, "in teaching, using...metaphor allows the instructor to relate a potentially unfamiliar idea with that which is familiar. For many instructors, the objective for doing so is to transform a foreign concept to one that may be more recognizable to the student." Going further, since "metaphorical language and visual imagery offers an openness to heuristic stratagems and is a possible vehicle for informal contextualization, exploratory learning, making meaning and everyday social interaction. ... metaphor is a way of understanding hidden connections, of reunifying the world which scientific understanding has fragmented" (Blewitt, 2005, p. 80. Internal quotation from Bate, 2000, p. 247).

Clearly, the focus in the above literature is on utilizing metaphor as a teaching strategy, in teaching circumstances. That is, metaphor is utilized as an instructor-driven pedagogical tool to teach students. The potential learning opportunity that arises when students have the chance to co-create metaphor as a learning activity, however, is not discussed; that is, the process of learning that occurs when students co-create the metaphors themselves to make sense and meaning of their learning and the curriculum and to co-discover new knowledge in a collective environment has not been communicated in the literature. Indeed, it is in these moments of being open to 'heuristic stratagems' and 'informal contextualizations' which stimulate further interest and investigation, that utilizing the cocreation of metaphor to understand the curriculum becomes an incredibly rich educational strategy that encourages, fosters, and facilitates a deeper and more meaningful learning environment for students.

As such, this paper outlines a process where a classroom environment was mobilized to create an opportunity for students to co-construct a metaphor through engaged dialogue and co-writing, emergent from the course material. Through this process of examining, analyzing, reflecting, conceptualizing the curriculum, we, as students, were provided with the space to engage with the course material, linking seemingly disparate ideas across disciplines. This process allowed us not only to move deeper into the thoughts and ideas (and thus the learning) involved in the course, but also to construct something that was personalized, meaningful, and representative of each of our sense- and meaningmaking frameworks. In so doing, we moved from the instructor-driven use of a pre-defined metaphor as a teaching tool to a student-driven emergent learning process of creating metaphor from our course material to further and deepen our own knowledge. Indeed, as

metaphor creators, we went beyond the learning enhancements and benefits listed in the literature and began to develop long-lasting learning skills—skills which we have continued to utilize in other educational environments. Thus, the following reflective work illustrates the power of metaphor as a learning strategy and promotes its use as a pedagogical tool, not on its teaching merits (which we do not deny), but on its ability as a curriculum activity to promote student learning. As such, this article argues for the importance of creating space within classroom environments to provide time and opportunity for metaphors to be cocreated by students to expand and enhance learning.

Methods: When Learners Create the Metaphor

The context for this learning experiment was a graduate course entitled Foundations of Capacity Development that ran in Fall 2006 at the University of Guelph, a comprehensive institution of higher education based in Guelph, Ontario, Canada. Our cohort was comprised of six graduate students (five female and one male) from two different programs-Capacity Development and Extension and Rural Planning and Development—and varying academic, personal, and ethnic backgrounds. Classes ran once per week for three hours and were structured as interactive seminars premised upon dialogue and debate. Curriculum was disseminated through a combination of books, journal articles, instructor explanation, and student presentations and covered the interdisciplinary field of capacity development. Both theoretical and practitioner-based concepts created the foundations of the material.

In the tenth week of a twelve-week semester, the instructor asked that as a group we reflect upon the curriculum and (attempt to) tie the information together in a meaningful and coherent way. The entire three-hour class was allocated to this endeavor and, after providing us with chart paper and colored markers, the instructor left the room to provide us with the privacy and the space to "create and construct, to wonder and to venture" (Fromm, 1964, p. 54) through this group process.

As we read through the literature on capacity development, we noted its lack of clarity, coherence, and, on occasion, explicit contradictions. We strove to take the various readings and bring their salient features together in a conceptual framework and understand the subsequent implications for learning. After several hours of brainstorming, debate, and dialogue, and after several unsuccessful attempts to represent our ideas and learning in boxed diagrams and flow charts, we felt frustrated and limited. How was it that we could fit the emergent act of learning and of building individual and collective capacity into static, bounded flow-charts and

diagrams? The answer: we could not. We realized that we needed a concept that was more metaphorical, something without distinct boundaries, something fluid, transient, and transcendent.

Throughout the discussion, one of our group members was doodling on a note page and started drawing a picture of a fire to try to explain her thoughts on capacity development. When this idea first occurred, there was a definite shift in the room. This metaphor, and this vision, spoke to each of us on many different levels. Immediately we began to take the main concepts discussed throughout the course and apply them to the components of the fire metaphor, from the ashes to the woodpile to the flames. Together we constructed a visual metaphor—for indeed we drew a picture—that not only brought the course material together and allowed us to review the material in a collaborative and rigorous way but also made sense and meaning for each individual in the room. This sense and meaning grounded in a metaphor held particular resonance for each person in the creation process but also was recognizable enough for other people unfamiliar with the literature to understand the material through a capacity-development-as-fire model.

The Results: Capacity-Development-as-Fire Metaphor

The metaphor of fire, and its four major components, provided a framework for understanding capacity development in theory and practice and united our thoughts and experiences in a way that was liberating and long-lasting rather than limiting or confining.

History and Ontogeny: The Ash Pile

Our journey begins at the base of every fire—the ash pile. In this metaphor, the ash is conceptualized as the history and the ontogeny of all that has come before and all that once was. History is shared—both between and among individuals and between and among collectives—and, as such, the ash represents histories, ancestries, and actions. In this light, the fire—whether it represents an individual or a collective—is built upon the ash of all past events, and thus represents a continuous connection between history and the present moment.

According to Maturana and Varela (1987), ontogeny is the history of structural changes that a particular living being has experienced. Within our metaphor, the ontogeny of the fire is directly tied to the history of what came before and to the structure of the particular pile of ash that has developed over time. Indeed, the ash is the foundation of the fire itself, and, as long as the fire is burning, the ash is continually

being added to and re-shaped. Within this understanding, the pile of ash—history and ontogeny—dictates the potential that an individual or collective may have.

Components of the Dialogical Process: The Firewood

In our conceptual understanding, the entire wood pile represents dialogue. Before we can begin to understand the dialogical process, we must examine the individual components (the logs) that comprise the process (the woodpile). We have defined five major components of the dialogical process, each representing an equal, but different, log in the pile: suspension, listening, reflection, languaging, and storytelling.

Suspension. Suspension is an important aspect of the dialogical process, and for many of us, it can be the most challenging part. It is essentially the suspension of our judgment of both self and other and requires being open to new situations and new possibilities. As Bohm et al. (1991) state:

Suspension involves attention, listening, and looking and is essential to exploration. Speaking is necessary, of course, for without it there would be little in the Dialogue to explore. But the actual process of exploration takes place during listening—not only to others but to oneself. Suspension involves exposing your reactions, impulses, feelings and opinions in such a way that they can be seen and felt within your own psyche and also be reflected back by others in the group. (pp. 7-8)

Suspension is the stage during which individuals are willing to consider the group's ideas, thoughts, opinions, and beliefs, and for this reason it can be defined as a living component that instantly works to support the other parts of dialogue. In this process, opinions and/or ideas are not put aside (it is impossible); rather, the participants create a space between their judgments and their reactions, thus opening a door for listening and for reflection.

During suspension, we all have an essential contribution to make, and each contribution is of utmost importance to the development of an integrated and holistic understanding of our experiences. We therefore feel free to express ourselves, thus creating an environment that enables a greater degree of honesty and openness. As we learn and develop the capacity to suspend, we become more supportive, less reactive, and more aware of our assumptions. As a result, our perceptions can greatly expand, broadening our understanding of both ourselves and others.

To suspend thought, impulse, and judgment requires concerted attention to the overall process of the

dialogical encounter—both individually and collectively. This may first appear to be arduous work, but if sustained over time, we develop our capacity for such attention. When suspension occurs, a deeper communicative consciousness emerges— a stage that Bohm et al. (1991) call 'participatory consciousness.' Without the suspension of our judgments, biases, and values, and without the willingness to bridge differences and listen to others, we can never hope to achieve true dialogue.

Listening. Once unlocked by the process of suspension, the door to dialogue is opened through listening. Dialogue is neither discussion nor debate (Bohm et al., 1991); it runs far deeper than the simple defense of our views and opinions. In order to engage in true dialogue, we must first listen—to our own voice and to the voices of others—for listening is at least as important as speaking. In so doing, we begin to comprehend the process by which we make meaning and by which others make meaning. Even as we speak, we must be conscious to listen to ourselves and to consider and perhaps integrate the thoughts of others who have spoken before us. In this way, we can move beyond mere debate and begin to understand those with whom we are interacting.

Reflection. Before dialogue can be initiated, there must exist a capacity for reflection (Freire, 2002). The dialogical process requires not only a suspension of personal beliefs in order for an integrated and open thought process but also a reflection on our thoughts, actions, and beliefs in relation to the others engaging in the dialogue. Reflection must be viewed as an active rather than a passive process, during which we are free to question our basic assumptions and those of others. Reflection, when coupled with suspension, can lead to a confirmation, a modification, and/or a transformation of our values and beliefs.

Languaging. A human social system exists as the co-ontogeny of all its individuals, linked through language. Our language depends both on our individual ontogeny and on our history of social interaction—the history of co-existence (Maturana & Varela, 1987). Languaging shapes interactions and frames individual stories; it defines the ways in which we see the world and how we communicate, but it also limits and confines us. We are all speakers and listeners, interacting through language with other speakers and listeners. Co-created meanings arise out of these linguistic relationships, and, as such, languaging gives voice to histories and ontogenies.

Storytelling. Storytelling is an integral part of the dialogical process: "storytelling is a relational activity that encourages others to listen, to share, and to empathize" (Kohler Riessman, 2001, p. 695). As such, storytelling can engage us on a personal level, for "stories gather people around them" (Plummer, 1995, p.

174, cited in Kohler Riessman, 2001, p. 696). Through storytelling, speakers and listeners interact and interdepend, exchanging lived experiences in continual dialogue, embedded within particular cultural and historical contexts.

Storytelling does not take place in isolation; rather, the way we make sense of the world and the way we tell our stories influence the sense-making and storytelling of others. In this process of sense- and meaning-making, some stories assume dominance and are heard over others (Röling & Maarleveld, 1999). In this way, stories have the ability to shape our social relations by determining our expectations and behaviours and by providing an unquestioned (con)text to our lived realities. It is the extent to which these stories take hold of our imagination and our sense-making that make them so powerful.

Through the act of telling a story, and through the experience of listening to another's story, we can live outside ourselves for a moment—we can suspend who and what we are—and begin to experience difference, dissonance, and conflict in a more personalized way of knowing and interacting. Stories not only fuel dialogue but can also ignite it. In so doing, storytelling leads to a more personal connection among all individuals involved in the dialogical exchange. We tell stories to open minds and to provoke action. Stories have the ability to transform us by bridging differences and by bringing us into contact with not yet encountered ideas, experiences, thoughts, feelings, and ways of being. Through this process, the act of telling a story and the act of listening to another's story leads to the writing and re-writing-storying and re-storying-of new narratives and new meaning constructions.

Dialogue: The Wood Pile

We cannot conceive of capacity development without dialogue; as such, we have placed dialogue at the centre of our fire metaphor. Dialogue is a process of self- and other- discovery, which unites suspension, listening, reflection, languaging, and storytelling. In this light, "dialogue is the encounter... [between and among individuals]...mediated by the word, in order to name the world" (Freire, 2002, p. 88). Dialogue is both an existential necessity and an act of creation (Freire, 2002).

The dialogical process allows our fundamental assumptions to be revealed, discovered, and challenged and for new insights and perspectives to be built—both individually and collectively. It explores social identity, inter-personal and inter-group relations, and difference—in essence, dialogue is equivalent to mutual meaning construction (DeTurk, 2006, p. 35). Hence, "dialogue presents itself as an indispensable component of the process of both

learning and knowing" (Freire & Macedo, 1995, p. 379), which cannot be separated from the lived realities of the individuals involved.

Dialogue is not about solving problems but about opening a space for us to encounter difference, tension, conflict, and dissonance. In so doing, dialogue provides participants the opportunity to learn and grow and to experience 'disorienting dilemmas' (Mezirow, 1991) or challenges to our deeply-held beliefs, values, and assumptions. Dialogue provides the opportunity for reflection and re-evaluation of these beliefs, values, and assumptions, and therefore can facilitate the construction and re-construction of knowledge. As such, the moment of dialogue can be understood as a moment of transformation (Freire, 2002).

Our vision of dialogue is not defined by goals but rather emphasizes a process that is spontaneous, regenerative, and unbounded by time. Moreover, our dialogical process is fundamentally grounded in love, trust, respect, and tolerance. Therefore,

Dialogue cannot exist ... in the absence of a profound love for the world and for people. To name the world, which is an act of creation and re-creation, is not possible if it is not infused with love. Love is at the same time the foundation of dialogue, and dialogue itself ... If I do not love the world—if I do not love life—if I do not love people—I cannot enter into dialogue. (Freire, 2002, pp. 89-90)

What then is the relationship of dialogue to capacity development and learning? Without the possibility of encountering difference and conflict, we can never hope to change and transform. Transformation, change, and growth do not arise from the places where we are most comfortable; rather, we transform when we encounter disorienting dilemmas (Mezirow, 1991), adversity, dissonance, difficulty. This experience of personal transformation can enhance our capacities for social action (DeTurk, 2006). The more willing an individual is to engage in dialogue, "the more fully he or she enters into reality so that, knowing it better, he or she can better transform it" (Freire, 2002, p. 39). For this reason, "dialogue is not just the encounter of ... subjects who look for the meaning of things-knowledge-but an encounter which takes place in praxis-in action and reflection—in political engagement, in the pledge for social transformation" (Gadotti, 1996, xi). Thus, in our conceptual metaphor, dialogue and the dialogical process—comprised of suspension, reflection, languaging, and storytelling—is the fuel of our fire of life and is the foundation from which the flames grow, develop, and change. Without the fuel,

the fire cannot burn, just as without dialogue, human life cannot thrive and evolve.

Interactivity: Flames

It is through dialogue that we involve ourselves in a multiplicity of interactions, from encountering differences to becoming aware of shared experiences to creating new stories and histories to reflecting on who and what we are. These interactions can be chaotic, but through dialogue, we can begin to deconstruct the chaos and to situate ourselves within the process of meaning-making. It is through these interactions that we become aware of, and learn to perceive, not only our differences but also the fundamental "pattern which connects" (Bateson, 1972). We therefore have chosen to represent the flames of our fire as the process of interactivity experienced through living.

Just as flames provide us with energy that has the potential to transform—heat and light—interactivity has the ability to open the way toward mutual understanding. In our metaphor, we conceive of interactivity as interconnectivity fueled by love, "or if we prefer a milder expression, the acceptance of the other person beside us in our daily living" (Maturana & Varela, 1987, p. 246). This is a very different understanding of love than we are conventionally used to—it is a love based on 'I love you because you are me. In our co-existence, we create a world. Without you, I could not create, and therefore, without you, I could not exist.' It is a love based on the accordance of space to each and every human being as equally valid, important, and absolutely imperative to the existence of our self. It is a love that understands that we are all inextricably interlinked, tied together in a web that is at once fragile and fleeting, yet permanent and infinite. It is a love that allows us to expand our cognitive domain. Without love, and without this acceptance of other living beings existing beside us, there can be no social processes and thus no capacity development (Maturana & Varela, 1987). Thus, love is the energy that creates the conditions that make transformation possible.

Capacity-Development-as-Fire Metaphor Summary

Throughout this metaphor, we have addressed the different components of fire. This metaphor takes a holistic approach, acknowledging that nothing exists in isolation. Indeed, our individual and collective strength is rooted within the interconnectivity between and among our fires and between and among the components of this metaphor: history and ontogeny; suspension, listening, reflection, languaging, storytelling, and dialogue; and interactivity.

The ideas and theories explicated in our metaphor can ignite action premised on the dialogical process—action which requires us to live differently in order to

change our worlds (Maturana & Varela, 1987). Through these dialogical encounters, we can find new ways toward our goals and aspirations, and new ways to becoming in the world. This understanding compels us as learners to (re)orient ourselves and our practices and to place the dialogical process and the co-creation of metaphor at the centre of our pedagogies and our educational environments.

Discussion: Learning With and From Metaphor

Throughout this work, we are interested in student learning and in the ways in which classrooms can be structured and curriculums can be used to provide students the opportunity to co-create and co-construct knowledge through metaphor. Following transformational and constructivist paradigm (Mezirow, 1991), this work argues that through the active cocreation of metaphor, individuals are able to acquire, accommodate, and assimilate new learning and new understanding, while simultaneously challenging previously held beliefs, meaning schemes, and meaning structures (Mezirow, 1991). Indeed, through this process, the co-creation of metaphor acts as the mechanism by and through which learners can integrate knowledge from the curriculum while simultaneously providing a means to incorporate this knowledge into a cohesive and synthesized heuristic format. In our learning experience, this format was not only easily understood by our group but, due to its metaphorical and recognizable nature, continues to be accessible and transferable to other learners and learning environments.

It is important to note that, following Cook-Sather (2003, p. 963), "the method [and pedagogical approach] for which [we] advocate in this article [are] more important than the actual metaphor used as a vehicle or medium for engaging in that method...It is [our] hope that educators will not stop with one metaphor or another, but rather keep moving as new metaphors open up new spaces of imagination that may well reanimate old metaphors." Indeed, it is also our hope that educators will resonate with the experiences in this paper and will consider not only utilizing metaphor as a pedagogical tool but also providing and creating the space within the classroom and the curriculum to allow learners themselves to co-create and re-create their own metaphors.

In order for this emergent co-creation of metaphor to occur, there are particular requirements for both instructors and students. Instructors must be ready to not only provide intellectual space and physical support (both during and after class) for this type of emergent educational process but also let go of control of the classroom and trust in the creative and intellectual processes of the students. In this sense, the instructor

becomes a facilitator of a co-process emergent from the students and supplies the environment and the permission for this to occur within a formal educational setting. It also requires that the instructor have respect for and openness to alternative forms of pedagogy and learning activities—ones that do not subscribe to learning based on 'right' or 'wrong' or are structured as linear marches towards one final answer. Providing this space for students to co-create metaphor could include various methods. In our case, through collaborative discussion and agreement with all students in the class, the instructor modified the course syllabus to provide extra class time to develop the metaphor. In addition, he also created a new assignment related to the unexpected activity (and dropped a previously planned one) and changed the course marking scheme. These changes and alterations gave us the space to creatively co-explore capacity development through the metaphor of fire and to continue to deeply engage in the curriculum materials while simultaneously creating new and transferable knowledge constructs.

Moreover, the learners must be committed to the learning process, but, going further, they must also be committed to learning with and from each other in a creative process. Learners also need to resonate with the importance of metaphor and be willing to take control of and responsibility for the learning environment, to shape it in ways that expand and enhance individual and collective intellectual and personal capacities. Finally, the learners must also be committed to dialogue and, with the aim of expanding and enhancing student learning, be ready (as much as possible) to move beyond comfort zones and previous assumptions and conceptualizations with the goal of furthering the integration and transformation of knowledge into personal meaning schemes, structures, and perspectives (Mezirow, 1991).

What is important in this process is not that we, as students, learned with and from metaphors (although that certainly did occur) but that we learned during metaphor, during the process of co-creation of a new metaphor to link seemingly disparate concepts, ideas, content, and curriculum. Indeed, through this collective process, we feel that we not only learned more and on a deeper and longer-lasting level than we would have on our own but also created something that meshed the voices, understandings, and meaning-making structures of all six participants. Going further, this process also caused a transformation in our class dynamics, our sense of intellectual community, and our individual learning—a transformation that involved "a deep structural shift in [our] basic premises of thought, feelings, and actions" (O'Sullivan et al., 2002, p. xvii). To this day, the metaphor has stayed with the group, and many of us have used capacity-development-as-fire

in other educational environments and continue to use metaphor to mobilize learning in teaching and learning settings.

Conclusion: Metaphors as Persuasive and Powerful Thinking Machines

As discussed in the introduction of this paper, metaphors are fantastic thinking machines, for they do what other thoughts cannot. By the putting together of two contradictory positions, or two things that do not 'normally' go together, metaphors produce uncanny tensions of absolute strangeness and intimate familiarity, incongruity, and resonance. Metaphors offer a particular plasticity in language and malleability in speech and word as they imagine new concepts in the world. Indeed, the permutations in possible language couplings are so vast that we can imagine the possibility of continually creating anew concepts and thoughts, which in their strangeness (yet familiarity) bind, hold, and captivate us, and in so doing, transform our learning (K. Houle, personal communication, September 18, 2008).

When these possibilities of creating anew are encountered in the classroom and become objects of student co-learning and co-creation, the possibilities for learning opportunities also become vast. In this light, metaphor, and the co-creation of metaphor, can become a pedagogical technique not only to teach students but also (and perhaps more importantly) to provide learners the opportunity to co-create their own metaphors (based on course material) and to learn from the metaphoric process. Thus, metaphor becomes an invaluable, deep, long-lasting, and potentially transformative learning process.

Indeed, throughout this group process, and with the understanding that metaphor lies at the heart of our thought, knowledge, and action (Lakoff & Johnson, 1980), we were able to take numerous journal articles. books, and lecture topics and come together as colearners to create meaning of and sense from the curriculum through a metaphor. This process not only united the course information but also spoke to each one of our group members on a variety of levels. Indeed, the metaphor of capacity-development-as-fire has continued to inform and inspire the ways in which our group approaches and/or explicates capacity development in our related fields. Going further, this learner-driven process has continued to inform our learning environments—be they formal or informal and our learning processes and strategies.

After moving through and reflecting upon the process, we believe that we each experienced an increased retention of materials and curriculum and were much more personally engaged with the material and the course content than we had previously

experienced (c.f. Garner, 2005). As a cohort and a community, we were able to take the complex ideas and topics of the course and unite them together, through an emergent and a co-created metaphor, in a way that was both powerful and transformative, personally and academically. Just as fires—individual or communal—warm us and gather us around them, so do metaphors and their co-creative construction draw people together in an emergent process of self- and other- discovery—a process built on learning, dialogue, respect, and co-creation.

References

- Bate, J. (2000). The song of the earth. London, UK: Picador.
- Bateson, G. (1972). *Steps toward an ecology of mind.* San Francisco, CA: Chandler.
- Blewitt, J. (2005). Education for sustainable development, natural capital, and sustainability: Learning to last. *Environmental Education Research*, 11(1), 71-84.
- Bohm, D., Factor, D., & Garrett, P. (1991). *Dialogue: A proposal*. Retrieved from http://www.ratical.org/many_worlds/K/dialogueProposal.html.
- Bowers, C. (1993). Critical essays on education, modernity, and the recovery of the ecological imperative. New York, NY: Teachers College Press.
- Boyer, E. L. (1990). Scholarship reconsidered: Priorities of the professoriate. Princeton, NJ: Princeton University Press.
- Cook-Sather, A. (2003). Movements of mind: *The Matrix*, metaphors, and re-imagining education. *Teachers College Record*, 105(6), 946-977.
- DeTurk, S. (2006). The power of dialogue: Consequences of intergroup dialogue and their implications for agency and alliance building. *Communication Quarterly*, 54(1), 33-51.
- Freire, P., & Macedo, D. (1995) A dialogue: Culture, language, and race. *Harvard Educational Review*, 65(3), 377-402.
- Freire, P. (2002). *Pedagogy of the oppressed*, 30th anniversary edition (M. Bergman Ramos, trans.). New York, NY: Continuum.
- Fromm, E. (1964). *The heart of man: Its genius for good and evil*. New York, NY: Harper Row.
- Gadotti, M. (1996). *Pedagogy of praxis: A dialectical philosophy of education* (J. Milton, trans.). Albany, NY: State University of New York Press.
- Garner, R. (2005). Humor, analogy, and metaphor: H.A.M. it up in teaching. *Radical Pedagogy 6*(2). Retrieved from http://radicalpedagogy.icaap.org/content/issue6_2/garner.html.
- Greenwood, J., & Bonner, A. (2008). The role of theory-constitutive metaphor in nursing science. *Nursing Philosophy*, 9(3), 154-168.

- Kemp, E. (1999) Metaphor as a tool for evaluation. *Assessment & Evaluation in Higher Education*, 24(1), 81-90.
- Kohler Riesman, C. (2001). Analysis of personal narratives. In J. F. Gubrium and J.A. Holstein (Eds.), *Handbook of interview research: Context and method*, London, UK: Sage.
- Lakoff, G., & Johnson, M. (1980). *Metaphors we live* by. Chicago, IL: University of Chicago Press.
- Lakoff, G., & Johnson, M. (1999). Philosophy in the flesh: The embodied mind and its challenge to Western thought. Berkeley, CA: University of California Press.
- Lakoff, G., & Turner, M. (1989). *More than cool reason: A field guide to poetic metaphor*. Chicago, IL: University of Chicago Press.
- Maturana, H., & Varela, F. (1987). The tree of knowledge: The biological roots of human understanding. Boston, MA: Shambhala.
- Mezirow, J. (1991). *Transformative dimensions of adult learning*. San Francisco, CA: Jossey-Bass.
- O'Sullivan, E., Morrell, A., & O'Connor, M. (Eds.). (2002). Expanding the boundaries of transformative learning: Essays on theory and praxis. Toronto, CAN: Palgrave MacMillan.
- Plummer, K. (1995). *Telling sexual stories: Power, change, and social worlds.* New York, NY: Routledge.
- Röling, N., & Maarleveld, M. (1999). Facing strategic narratives: An argument for interactive effectiveness. *Agriculture and Human Values*, 16(3), 295-308.
- Schön, D. A. (1979) Generative metaphor: A perspective on problem-setting in social policy. In A. Ortnoy (Ed.), *Metaphor and thought*. Cambridge, MA: Cambridge University Press.
- Serig, D. (2008). Understanding the conceptual landscape of visual metaphor. *Teaching Artist Journal*, 6(1), 41-50.
- Thomas Couser, G. (1990). Seeing through metaphor: Teaching figurative literacy. *Rhetoric Society Quarterly*, 20(2), 143-153.
- Turner, V. (1980). Social dramas and stories about them. In W. J. T. Mitchell (Ed.), *On narrative*. Chicago, IL: University of Chicago Press.
- Williams, L. (1986). *Teaching for the two-sided mind*. Clearwater, FL: Touchstone Books.

ASHLEE CUNSOLO WILLOX is a PhD Candidate in the School of Environmental Design and Rural Development and a SSHRC Canadian Graduate Scholar, University of Guelph. Uniting qualitative methods with environmental philosophy and theory, her research examines the affective dimensions of climatic and environmental change, and the subsequent impacts on mental and emotional health and well-being in Northern Canada. She is currently the Co-Director (with Sherilee Harper) of the *Changing Climate, Changing Health, Changing Stories Project,* a community-based, participatory, and interdisciplinary project examining the impacts of climate change on human health and well-being in Rigolet, Nunatsiavut. She also researches and works in adult education, capacity development, and the Scholarship of Teaching and Learning. She has published and presented her work in journals and conferences nationally and internationally.

SHERILEE HARPER is a PhD student in Epidemiology and a Vanier Canada Graduate Scholar (CIHR) at the University of Guelph. She is currently the Co-Director (with Ashlee Cunsolo Willox) of the Changing Climate, Changing Health, Changing Stories Project in Rigolet, Nunatsiavut. Her current areas of research interest include EcoHealth, public health, climate change, waterborne-disease, and capacity development.

DAWSON BRIDGER recently completed an MSc in Capacity Development and Extension from the School of Environmental Design and Rural Development at the University of Guelph. With a focus on Communities of Practice as a tool for capacity development in community coalitions, Dawson conducted research on health and safety organizations across Ontario. Now working for the Toronto-based charity Free the Children, Dawson manages their US Youth Programming initiatives, which builds leadership skills in youth across America, while promoting an increased awareness of international development issues.

STEPHANIE MORTON completed an MSc in Rural Planning and Development at the University of Guelph in 2006. Her research focused on institutional assessments in project planning. Her interests are based in workplace development and adult learning, incorporating issues of gender equality and human rights, and she has experience working in West Africa, South Asia, and Latin America. She has also been involved in curriculum development, program evaluation and project development. Since 2007, she has been working on fundraising and grant writing in Southern Mexico with grassroots organizations. She is currently working with a community foundation based in Quintana Roo and is acting as a liaison among donor groups and local ongoing projects.

ARIELLA ORBACH holds a masters degree in Rural Planning and Development from the University of Guelph. Her main interests include local and autonomous project development, capacity development and co-learning in rural contexts, and rural/indigenous communication(s). Since 2009, she has been working with indigenous communities in southern Chile to build community capacity for strategic communication through locally-appropriated audiovisual technologies, for the promotion of indigenous rights and culture. She is currently co-coordinating a project that supports a multi-community effort to create a mobile rural (indigenous) community television channel. Through her work, she has collaborated with numerous non-governmental and community-based organizations in Quebec, Canada and in Chile.

SILVIA SARAPURA is a PhD student in the School of Environmental Design and Rural Development, University of Guelph. With a background in agronomy and capacity development, she is currently researching the impacts of agricultural innovation systems on the development of individual and community capacities in developing countries. She is committed to a career of creating sustainable rural systems in developing countries by increasing the availability of new agricultural technologies, and enhancing the quality, efficiency, and impact of development programs.

Acknowledgements

Many thanks to Allan C. Lauzon, University of Guelph, for creating the educational environment that allowed for this metaphor-creation process to occur and for his support for and comments on an earlier draft of this article.