ENCOUNTER

EDUCATION FOR MEANING AND SOCIAL JUSTICE

VOLUME 25, NUMBER 4 WINTER 2012

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Encounter: Education for Meaning and Social Justice (ISSN Online: 2158-8414) is published quarterly in March, June, September, and December by Holistic Education Press, P.O. Box 328, Brandon, VT 05733-0328. 1-800-639-4122. E-mail: <encounter1@great-ideas.org> Website: <http://www.great-ideas.org>. Annual subscription rates are $30 for individuals, and $135 for libraries. Selected printed back issues are available at $10 per copy. Subscribers receive an announcement card as each issue is published. Full-text online services are provided by hostplanet.us.

Possibilities Inherent in a Learning-Centered Pedagogy

Accessing and Leveraging the Richness of Human Capacities

Elite Ben-Yosef and Limor Pinhasi-Vittorio

Learning is optimized in an emotionally, mentally, and physically safe space where everyone belongs, has a voice, and is accepted as they are.

Each of us inevitable, each of us limitless.
Each of us with his or her right upon the earth,
Each of us allow'd the eternal purports of the earth,
Each of us here as divinely as any is here.
Walt Whitman (2004, 177)

The immense power of human minds to deepen understanding, grow knowledge, and create technology to benefit and enhance lives, is evident everywhere around us. Yet low achievement on the margins of classrooms and high dropout rates for specific social groups are still a disheartening reality. One cannot escape noticing an enduring disconnect between theory, praxis, and performance in our education system. While the halls of academia are abuzz with the latest research findings and new understandings regarding teaching and learning, we find limited applications trickling down to the trenches where teachers and learners struggle within dogmatic curriculums and frustrating limitations. Even with huge monetary investments to bolster the system, the tenacious achievement gap for some groups of students seems not to be budging.

As professors with teaching experience ranging from elementary school all the way up to in-service teachers, we are continually confronted with this ex-

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asperation: teachers say that there is nothing they can do in their classroom to make the learning more engaging and relevant to the students' lives because of constraints imposed from above, while students profess to being somewhere between boredom, disregard, or hating school. Regardless of this state of affairs, academic debates rage on, leaving teachers in an ambiguous position, wavering between their own understandings of what makes good teaching and the demands of the system, between teaching for learning and teaching for tests, between caring for the wellbeing of their students and their obligation to sort, compare, label, and exclude. Their authoritative standing in the classroom has eroded and is often undermined by anxiety about knowledge, evaluations, and (im)possibilities for better teaching. At the same time, students and parents are led to believe that only school-sanctioned literacies are important and imbued with social capital, while school-prescribed curricula, focused as they are on college acceptance, confer a deficit stigma on learners who can't or don't do so. Our sociocultural institutions tend to depreciate learners who have different ways of learning, other-than-school-strengths/agendas in their lives and different ideas about their future.

Years of reflection upon personal experiences and professional work have made us aware that all people can learn, desire to learn, and want to continue learning to better their lives and opportunities. We learn from the day we are born, yet we learn in different ways and our learning diverges to accommodate various needs, interests, and goals. This diversity is considered problematic in schools and is, in general, addressed negatively (e.g., special education labeling, dropping out, failing grades), but could otherwise be seen as the amazing resource that it is. Imagine the benefits that would ensue from embracing the profusion of ideas, talents, strengths, interests, paces, and passions of *all* the intriguingly diverse children in schools. Imagine the possibilities that would open up for students if we could point each one toward achieving success at something accessible and/or important to them. Imagine harnessing the multiplicity and range of human abilities to leverage the reach of teaching and the scope of learning while exponentially expanding our understanding of the multiple faces and functions of literacy. Contingent to such an approach is a more self-confident, creative and diversely able workforce, more fulfilled teachers and students in an energized and satisfying school experience.

An Illustration

> Hava was a dancer but had a difficult time in school, finally graduating from an alternative high school. All she really wanted to do was dance so she tried a dance program at a state college but after the first semester she was back home because of the academic challenges and she began waiting tables and bartending to support herself. She became depressed over her failures to perform and for a year did nothing but work and sleep. A friend coaxed her into an exercise class where Hava found success and trained to become an instructor. Today, at 23, she is a generally satisfied, socially productive aerobics and Zumba teacher.

This paper is addressed directly to teachers *within* the system, offering them the space and tools for introducing changes into their pedagogy to enhance learning experiences across the board. We suggest a personal change of perspective — shifting away from an industrial, instruction-centered pedagogy focused on the system itself, to a learning-centered pedagogy focused on the learners and their learning. By valuing the abilities of all students as necessary for weaving the social fabric (we cannot live without entertainers, drivers, astronomers, nutritionists, elder-care workers, nuclear physicists, gardeners, zoo keepers, and all others), teachers can direct each student towards personal possibilities of success within the given curriculum, leading to higher motivation and engagement in learning that, together with a sense of empowerment, could lead learners to undertake greater learning challenges.

"Train a child in the way he should go" is written in the Bible (Proverbs 22:6), and while other ideas we highlight are more recent, everything has been said before by greater scholars. In this paper we have culled antecedent ideas and writings and have intertwined these into an operational matrix that we believe gives teachers the option to establish learning classrooms within the current system, to the benefit of all.

Learning

What Do We Mean by "Learning"?

Learning is the ongoing process of making meaning of information leading to change in one's consciousness and behavior through participation and interaction with the environment. Information, when understood, becomes knowledge; learning is the mindful acquisition of knowledge that is relevant to our lives. This is a natural process occurring from the moment we are born (maybe even before), continuously throughout our lives. It takes place in any and every environment: at home, playgrounds, clubs, organized activities, informal gatherings, on the internet, at the zoo, museum, or alone in our room. Archimedes is said to have had his proverbial *eureka* moment in the bathtub.

Learning results from our active engagement with the cultural, social, biological and physical worlds around us, hence its strong correlation to movement.[1] Additionally, the deep changes in consciousness and behavior that we expect to see in students who learn take time and are predicated on achieving success along the way (Shane & Wojnowsk 2005; Shulman 2008).

An Illustration

> Joshua Foer, a regular guy by his own description, covered the 2005 World Memory Championships as a journalist for *Discover* Magazine. Realizing that the contestants used a specific technique to memorize huge strings of information, he decided to try it himself. For a year he explored the meaning of memory while practicing and mastering the technique. A year later he won the U.S.A. Memory Championship. In an article about his experience he wrote of his learning process: "I'd learned firsthand that with focus, motivation, and above all, time, the mind can be trained to do extraordinary things" (Foer 2011, 76).

We learn when we *want to* learn, when something *interests* us and *seems relevant to our lives and wellbeing*, when we think our lives or the lives of those important to us *will improve* through the learning, when we are *intrinsically motivated* to make the effort. Contrary to what some educators think, learning is not an activity that happens only in school and it cannot be forced on students through rewards, raising one's voice, or punishment. We learn all the time, often, in spite of school experiences.[2]

A Theoretical Compendium

Our education system was conceived around the needs and interests of the new middle class and the industrial society it was helping create in the 19th century. Schools developed to deal with mass education using ideas that would ultimately be aggregated under the umbrella of behaviorism, subsuming such concepts as the melting pot where differences are erased and homogenized to produce "mental sameness" within a vision of standardization (i.e., standardized tests, language), centralization (i.e., the teacher/curriculum as ultimate knowledge authority), concentration (i.e., work was concentrated at the office or factory, education in schools), and synchronization ("time is money") which produced a preoccupation with linear time and precise measurements (Glass 2005). To free up adults for work while preparing the future factory-centered workforce, children were put in schools and taught reading, writing, and arithmetic, with a covert curriculum of teaching punctuality, obedience, and rote, repetitive work. Today, although public education strongly emphasizes channeling "able" students into higher education, its factory-based vision and practice still prevails.[3]

This pedagogy seems to be a fair and unbiased practice due to its "color blindness" and its regard of learning as universal and linear: an "average" child given access to education *should be able* to learn, autonomous of her own and the learning environment (Street 1995, "autonomous" model of learning). Teachers instruct by depositing knowledge in the minds of mostly passive students (Freire 1993, "banking model" of education) in a *lecture-drill-review* format. Learning occurs through positive and negative reinforcement of repetitive behaviors. This approach usually does not work, however, for learners whose grades place them farther from the median of the normal curve.

An Illustration

> Sara was in 2nd grade and couldn't remember the two's multiplication table. An aide pushed in

to help her and suggested the teacher tape a times table to Sara's desk because calculators are available and Sara could lessen her anxiety and free up her mind to other learning. The teacher responded that it wouldn't be fair to the rest of the kids. "Why not put one on every desk?" asked the aide. "It's cheating" was the perfunctory reply. So Sara stayed in special education, slipping farther behind as she worked with parents and tutors on memorizing the multiplication table and building a deep anxiety associated with school, tests and, especially math.

At the intersection of the industrial and knowledge economies we find the advent of cognitivism, propitiously adding the minds of the learners and their social contexts to the teaching/learning equation, focusing on the content of learning. While the individual brain is likened to a computer processing incoming information, the human mind, consciousness thoughts, meaning making, language use, and educational pedagogies are understood to be ideological constructs situated in specific cultural and social contexts (Vygotsky 1986). According to the concept of distributed cognition, knowledge construction is achieved through negotiation among and between the learners and their environments, texts and artifacts, teachers, peers and classroom settings/contexts (Gomez et al. 2010). Teachers orchestrate the instructional setting and the multiple interactions within it to elicit learning outcomes from the students — outcomes that are mostly preconceived (a "right" answer) and subjected to measurement by standardized instruments.

The New Literacies approach holds that literacies are multiple, contextual, inextricably connected to learners' circumstances, environment, sociocultural experiences, ways of knowing, and embedded in social power hierarchies. Learners are affirmed in pursuing specific content/information, or not, according to the fit and interaction between their personal literacy constructs and interests to those of the learning environment (Barton & Hamilton 1998; Ogbu 1992; Street 1984, 1995; Vygotsky 1986).

An Illustration

The 7th grade teacher was teaching about the repressive and inhuman conditions in Polish ghettos in 1938. Interrupting her, Tanisha called out, "Are you telling me that these people lived in ghettos like us?" The teacher had to rethink her script and augment it to include Tanisha's experience, explaining that there are different ghettos in different places and times in history, connoting similar or diverse experiences. The lesson continued with the teacher asking the students to compare/ contrast the Polish and current urban ghettos in small group "think-tanks."

Constructivist theories, firmly rooted in the knowledge economy, endorse learning as an organic (not mechanistic or linear), contextualized process of evolving construction and reconstruction of knowledge in relation to the interaction between embodied individual experiences and socioculturally embedded dynamics. Learning is an ongoing individual process that we all engage in throughout our lives in order to understand the world and help ourselves fit into our specific environment (Clancey 2008; Heylighen 2010).

Educational constructivists accept cognitivists' understanding of the structures and functions of the mind, but shift the focus to the *process* of learning rather than the *content* by looking at: 1) the contextualized, situated, individual learner/mind and the diversity of motivation, attitude, contexts and conditions of learning,[4] and 2) the specific brain functions through which information is transformed into knowledge and the manipulation of this knowledge for the manifold human needs (Harlow 2006).

Constructivist pedagogy embraces four key principles: 1) Learning is a dynamic process of creating changes in consciousness and behavior as learners actively construct and reconstruct their knowledge through interactions with and participation in their environment. 2) Learners are co-producers and active participants in planning, monitoring, and evaluating their learning, and are responsible for self-motivation to learn. 3) Learning is based on processes of distributed cognition in the interaction between two or more people and/or the tools/artifacts available to them. It is socially (i.e., schools, sports teams) and culturally (i.e., literature or music) constructed in collaborative experiences of thinking and action where participants have a common goal and share responsibilities of reaching understanding. 4)

Learning is situated and contextualized: the content as well as the physical conditions and mental environment of learning powerfully impact the individual's learning process. What one already knows affects and channels what is expected to be learned, what will be learned, stored in memory and retrieved (Dolmans et al. 2005; Ormrod 2008). Going back to Sara and the multiplication table, constructivists would realize the need to use Sara's strengths to access her learning abilities while allowing her to achieve small successes on the way.

Learning dynamics are complex and messy as learners are challenged to think critically about the world, struggle, take thinking risks, experiment, investigate, discover, and construct knowledge. The knowledge base of disciplines cedes priority to "the meta-skills that underlie knowledge acquisition and application *across* disciplines: immersion, curiosity, resilience, critical thinking, the embrace of complexity, the persistent quest for converging evidence" (Shpancer 2004, 27). Learning methods that are anchored in authentic situations to the point of "cognitive apprenticeship" are a way of enculturating learners in literacy practices through social interaction (Mattar 2010). Teachers mindfully lead and scaffold students' learning as coaches, enablers, and supporters in a polyvocal process that involves all as both teachers and learners, because "[g]ood teachers do not *instruct* pupils what to remember; instead they help the pupils to *construct* their own understanding of a concept" (Heylighen 2010, 41).

An Illustration

> The 4th graders were preparing for Columbus Day. First introduced was the traditional narrative focused mainly on the first voyage: *Follow the Dream: The story of Christopher Columbus* by Sis. The children learned the story from Columbus's perspective and developed empathy toward him and his enterprise. Next, *Encounter* by Yolen and Shannon was introduced, recounting the same story from the perspective of a Taino boy, native of Hispaniola where Columbus and his people maimed, killed, infected, extorted, and enslaved the population.
>
> Adam was surprised to hear such a different story about the same events and wondered aloud whether this was the same Columbus. Teacher and students began questioning the texts, negotiating the seeming gaps between the two stories in an attempt to understand what actually happened. Teacher and students together and individually reconstructed new understandings of Columbus's voyages.

The amount of knowledge available in the world has doubled in the past ten years and keeps doubling every 18 months in the present. While previous theories focus on knowledge as an *objective* or a state that is attainable by a learner, *connectivism* focuses on the networks in which human knowledge is stored and the processes of accessing this knowledge by an interested individual or organization. Learning can no longer be based on one's experiences alone and needs to connect to experiences of many others, creating a network of up-to-date knowledge which resides in human and non-human networks (i.e., a community, a database). Knowing where to find needed information and gaining access to it, is considered more important than the knowledge one already possesses (Siemens 2005).

So, rather than schools being about memorization of content (7x9=?), in present global and local circumstances the focus must be on literacy of information navigation, "…the ability to be your own reference librarian — to know how to navigate through confusing complex information spaces and feel comfortable doing so" (Brown 2002, 5). The teachers' role, in addition to being enablers, role models, and coaches, is to offer a narrative of coherence for the deluge of information about the topic being taught/learned.

Putting these ideas together allows us to envision a different approach to schooling: a learning-centered pedagogy approach that provides all teachers and learners the potential for self-empowerment through success within the current system.

A Learning-Centered Pedagogy

To better function in the current and developing work and living environments, we need less generalized content and more specialized knowledge, creativity and innovation, flexibility and adaptability to changing circumstances. Educational objectives need be fine-tuned to increase these skills, cultural understanding and respect, communication, collab-

oration, problem solving and ethics, and to work for purposes beyond self-interest to improve the lot of all (Gardner 2008; Kress 2010; Robinson 2011). General education should focus on

> cultivating children's building of repertoires of cognitive and behavioral strategies and options, helping them to recognize the complexity of situations and to respond in increasingly flexible, sophisticated, and creative ways (Immordino-Yang & Damasio 2007, 7).

A learning-centered pedagogy culled from existing educational theories and framed within the prevailing system can facilitate reaching these goals.[5]

Two basic concepts underlie a learning-centered pedagogy: Learning is both universal and personal.

Learning is universal. All people can learn, want to learn and learn continuously. We learn mindfully, as we construct and reconstruct our mental models with new knowledge relevant to our lives, through active, interactional experiences of experimentation, investigation, and discovery. Our learning is optimal when immersed in authentic situations and where learners engage and take responsibility for co-producing their own learning. Learning happens all the time in all of our life situations, yet classrooms need special attention to be become loci for actively producing learning since they are traditionally arenas for delivering instruction.

Learning is specific to each learner in context. A learning-centered pedagogy foregrounds the *situated nature of cognition* embodied in our physical/biological abilities and capacities, as well as in the external cultural and social environments within which our minds are embedded. Literacies are multiple and their value varies according to every learner at a specific time and place (fixing cars, painting, cooking, molecular biology, writing legal documents, teaching pre-K, raising kids, reading the classics, etc.). We can be intrinsically motivated to learn when our lives and interests are included and when teaching emanates from understandings regarding how/when/why people learn best, supplying the necessary skills/tools for learners' to realize their *own* learning potential. Teachers must leave the limelight to metaphorically become a hub and network administrator initiating, facilitating, supporting, and bridging diverse students' learning as they develop appropriate mindful capacities. Student learning is assessed individually through "tangible outcomes, changes in students' skills, values, understanding, propensities or sensibilities," rather than through tests and comparisons (Shulman 2001, 4).[6]

The Magic Toolbox

What does a learning-centered pedagogy look like in practice? Mie Araki (2003) provides a glance at such a process in *The Magic Toolbox*, a young children's book that reaches deep into the heart of the issue. The story tells of Lulu the rhinoceros who repeatedly succeeds in building with blocks while Fred the rabbit always fails, until he loses his motivation and leaves the classroom. Outside he finds a "magic" toolbox that provides him with direction and (very regular) tools as well as physical and emotional support as Fred plans, draws, saws, hammers, and builds a wonderful "real" house. When Lulu sees the house, she is astonished and asks Fred how he managed such a feat. Araki's answer: "Nothing to it when you have the right tools." The last page of the book shows Lulu and Fred dreaming of building a huge castle together.

The Magic Toolbox abounds with insights about learners, learning, and effective teaching. First and foremost is the understanding that everyone *can* learn, and that even if the traditional curriculum (e.g., building with blocks, which are available, considered age-appropriate and the right stepping stone on the way towards higher level learning) confounds some, they can and will learn in other contexts and in other ways, highlighting the understanding that much learning happens *outside* the classroom and the sanctioned curriculum. Second is the realization that the teacher's job is twofold: to enable the learning process and to support the learners' efforts. In the story, the toolbox enabled Fred's success by teaching him that he must plan and draw his house before he could begin building it, or when he was building the chimney, for example, the toolbox supplied the bricks. When, at times, the work seemed too difficult or painful for Fred who banged his finger, became tired, dropped a nail while standing on top of the ladder, the toolbox provided a cherry lollipop, band aids, encouragement, and a positive, lively attitude. (It juggled the paint cans as Fred was painting the house.)

During the whole process the toolbox/teacher is always there, but a bit to the side (in one scene it is "napping" on the swing while Fred works, smiling) and it never "tells" or corrects, only gently directs Fred's process. When Lulu marches in to give the final judgment about the project, Fred is seen standing tall and proud by the door of the house and the toolbox/teacher is on his side deferring to him. This emphasizes the concept of teacher as coach and supplier of tools to the learners' learning processes and it inspires us to realize that it is the learners' success that is the teacher's ultimate goal and reward.

Understanding the processes of learning in the brain and mind can help us make informed pedagogical decisions as foundations for lessons in which students are empowered to learn and teachers are empowered by their students' success.

Learning Processes in the Brain and in the Mind

Survival Mode or Learning Mode

The primary role of the brain is safeguarding one's survival by constantly scanning the environment for signs of physical, cognitive, and emotional danger and responding/correcting for problems (Wolfe 2001; Zull 2002). Input from our senses goes directly to the amygdala, the emotion processing center in the brain, and is evaluated for threats to our wellbeing. If threats are detected, the amygdala literally hijacks the prefrontal cortex, which governs our decision-making capabilities, and our "fight-or-flight" system kicks in. The brain goes into "survival mode" in which it is reactive, concentrating on removing the physical and/or emotional danger while becoming unavailable for learning, innovation, flexibility, or for processing any incoming information that is not directly relevant to the present crisis.

An Illustration

> Danny wandered around the office aimlessly, alternating seats between the principal's room and the secretary's desk, receiving an occasional pat and caring words from whoever walked by. When asked why Danny wasn't in class, the principal answered: "He is unavailable for learning today. He is very agitated, very anxious. Things are going on in his life that are difficult for him to handle, so we let him be where he feels comfortable. He can't learn in this condition anyway."
>
> Danny wasn't speaking to anyone except for repeating in a low voice: "Tomorrow we are going." At one point, the principal reacted to this "chant": "You're moving to the new apartment tomorrow, I know," she said on her way out. "We're going on a plane" he replied quietly, but she was out of earshot.
>
> The next day Danny was gone. He was smuggled out of the country by a relative fighting the state for custody over him and his two brothers. It later turned out that Danny knew that they were being kidnapped but was threatened with death if he told anyone who could foil the trip. No wonder Danny was unavailable for learning at that time (Ben-Yosef 2003b, 105-106).

When people feel safe, when they realize that there are no threatening situations close by, no immediate major fears or stress, the brain changes into "learning mode" where it is freed up, open, and available for attending to learning. In this safe space the learner's brain is ready to lay down new networks and create new neuronal connections for constructing new knowledge. Importantly, the two modes of the brain, survival and learning, are *mutually exclusive* so that we can only be in one or the other at a time, hence the primary objective of a learning-centered pedagogy is the creation of safe classrooms where students' brains can be in learning mode.

In the Classroom

> The most important implications for teaching/learning is that students in survival mode due to anxiety, fear, worries, depression, hunger, lack of sleep, etc., are physically unable to learn and nothing extrinsic can force them to. (There might be rote compliance and/or memorization, but not true learning). Teachers would be most effective in such situations by allowing these children to stay outside of the teaching/learning circle for a while, as they attempt to help with the issues the child is dealing with. The tool to be used is patience based on the understanding that for learning, which is our goal, time is not of the essence, the learner is.
>
> The fundamental concept underlying a safe

> classroom is an ability approach to *all* learners, the non-judgmental, honest belief in every student's desire and ability to learn and succeed — at some times and some things better than others — according to personal goals and circumstances. Safe classrooms value diversity and polyvocality, are experiential, focused on learning and learners, are respectful of students' needs, interests and passions, with teachers leading as coaches and enablers of everyone's learning.
>
> Cultivating a sense of belonging to the classroom community also engenders feelings of safety, because inclusion gives us a feeling of being worthy, protected, and powerful; we care for other members rather than judge them, take responsibility rather than try to disappear from sight, and are motivated to participate because we have a stake in the game. Think of sports fans that go to games, root for "their" team, follow the players' lives and remember all the stats. They tie the big story (of the specific sport) to the little story (of their own lives) resulting in a feeling of inclusion (VanDeWeghe 2011). In the safe classroom we can create a sense of belonging by tying the big picture of dominant literacies, curricula, and school culture to each of the students' little stories: their lives, interests, and proclivities.

To better understand how to facilitate such inclusive experiences, we need to dig deeper into the learning/brain connection.

Learning and the Brain[7]

The human brain is a dynamic organ that always learns as it encodes information in response to our interaction with the environment. Our brains develop throughout our lifespan because of their plasticity, the ability to change over time. *Experience-expectant* plasticity is a general evolutionary expectancy of experiences of human beings living in the world related to universal basic needs such as food, shelter, and procreation. We study, train, and search for a job that can afford us these basic human needs as we go through the lifecycle (Gruhn & Rausher 2007).

Experience-dependant plasticity is change in the brain as a result of exposure to specific environmental stimuli that a specific individual experiences, such as going to school, working in a coal mine, being a nurse, skateboarding, etc. (Gruhn & Rausher 2007). As we act and interact within our unique contexts, our senses input distinct information into our brain where it can become knowledge. This leads to the realization that every person will have very different contextually dependent knowledge, while our *experience-expected* knowledge will be quite similar.

Learning transforms the existing networks of neurons in our brains by either creating new connections between neurons (synapses) when new information comes in, or by strengthening existing connections through experience and repetition (called Hebbian learning). New neuronal connections must always attach to already existing networks. For example, if we were to address a person in a foreign language she doesn't know, the sounds would reach her brain, but without finding any existing neuronal networks to connect to, would not "stick" to become knowledge in her mind. This learning dynamic was described by Piaget metaphorically as processes of assimilation and/or accommodation for restoring equilibrium in the schema when it is disrupted by new information: A learner who encounters and begins exploring an object or idea, initially tries to assimilate this new information into her existing schema and if it matches existing categories, it is assimilated. If the new information does not match current schema, disequilibrium ensues. The learner is motivated to re-establish equilibrium through accommodation, a process of reconstructing the schema to fit the new information (cited in Harlow et al. 2006, 45).

An Illustration

> A child who is told not to touch the coffee cup because it is "hot" may listen and learn or may need to touch the hot item to experience the feeling. In either case, through participation and interaction with the environment (more experienced people, the hot item itself), the child learns that hot things should not be touched and will from then on, hopefully, change her understanding of hot things and the behavior towards them. If the child already has a category of "don't touch/pain" in her mind, it will be easy to assimilate the new directive of "the

coffee cup is hot so don't touch it" into a prior knowledge category. When the information coming in is different from the existing schema and there is not a clear category into which to fit it, a new category is created to accommodate the new concept. If "hot" is a new concept for the young child, she will have to rearrange other categories in her mind (i.e., "things that I can touch," "things that cause pain") to make space for the new category of things one should not touch since they cause pain.

All this said, we must remember that there is diversity in mental functioning just as there is in any other aspect of human life. The idea of neurodiversity prompts us to apply an ability approach to different ways of knowing and learning and see these as lying on a continuum, so "instead of regarding large portions of the American public as suffering from deficit, disease, or dysfunction in their mental processing, neurodiversity suggests that we instead speak about *differences* in cognitive functioning" (Armstrong 2010, 1). As any other mindful activity, our ways of knowing and learning are socially/culturally/historically constructed and just as mental capacities can adapt to environmental demands, there is the possibility of adapting the environment to the specific abilities of differently-functioning brains of learners. And the more enriching the environment, the more complex is the network of neuronal connections that develop in the brain which, in turn, has an easier time adapting to the needs of the surrounding environment (Armstrong 2010; Ben-Yosef 2010, 2011; Bransford, Brown & Cocking 2000; Massa & Pinhasi-Vittorio 2009, Pinhasi-Vittorio & Martinsons 2008, 2009, 2011; Wlodkowski & Ginsburg 1995).

In the Classroom

The dynamics described above provide us with a vital tool for creating a productive lesson: teaching that begins from where the students are, from the history, stories, and experiences they bring with them to the classroom, from their existing funds of knowledge, interests and diverse ways of knowing. Learners who find connections between activities in the classroom and the knowledge/concepts/associations/expectations/interests already in their own minds, will be more motivated to engage with this information.

A Working Example

When the curriculum directs us to teach biography, rather than choosing a person for the whole class to study ("Someone I think you will all find interesting…"), the teacher can allow every student to choose someone of interest to them, be it a race car driver, rapper, female basketball player, or someone who grew up in their neighborhood and wrote a memoir. The students are encouraged to present their work to the class in a format of their choice (technology, music, art, etc.) which adds to their motivation and enriches both the individual and the general learning experiences.

The benefits here are at least threefold: 1) Self-motivation and engagement in learning will be strong, allowing the teacher a position of facilitator (rather than drill sergeant); 2) The presentations and sharing of work lead to wider and richer learning experiences for the whole class, and most importantly; 3) Learning has great potential of becoming a positive/successful experience, possibly even reaching Csikszentmihalyi's (1996) "flow" where the learner is one with the activity she enjoys doing — which, in turn, leads to motivation for engaging in more of the same.

Learning and the Mind

A person never steps in the same river twice,
because the river is different and the
person is different.
Heraclitus

Our minds are flexible structures/networks of existing knowledge that are construed metaphorically as webs of belief (Quine 1960), mental models (originally coined by Craik, 1943/2010) or schema (Piaget 1953) that change and develop by attaching new information to the knowledge which is already there. In an individual process of fitting incoming bits of information from the world surrounding us to our minds, we reconstruct and transform our existing schemas time and again to assimilate, accommodate, or discard information. Ultimately, information in and of it-

self is meaningless until it is acquired by the mind of an individual, connects to her existing schema, and becomes useful knowledge to that specific person.

Mokyr (2003) differentiates between two kinds of "useful" knowledge a person should aspire to attain: *propositional* knowledge that describes and catalogs natural phenomena and regularities, and *prescriptive* knowledge that we call technology, which deals with the use and manipulation of phenomena for human needs. Teaching is a technology for use in promoting student learning, which itself is a technology used for growing one's mind and knowledge. Mindful teaching provides learners access to both kinds of knowledge that they learn to transfer and use in future situations.

Through learning we make sense of the complex world, parceling, ordering, categorizing, and classifying it into piles and groups, making distinctions "for the same reasons we carve a turkey or write our books in chapters — to make the world more manageable" (Shulman 2008, 36). Shulman (2002) organized learning into a dynamic cyclical process that proceeds through interaction with the environment and leads learning from perception to participation (although the cycle usually begins from engagement, it can begin from any other point). (See Figure 1)

Learning begins with student engagement, which in turn leads to knowledge and understanding. Once someone understands, he or she becomes capable of performance or action. Critical reflection on one's practice or understanding leads to higher-order thinking in the form of a capacity to exercise judgment in the face of uncertainty and to create designs in the presence of constraints and unpredictability. Ultimately, the exercise of judgment makes possible the development of commitment. In commitment, we become capable of professing our understandings and our values, our faith and our love, our skepticism and our doubts, internalizing those attributes and making them integral to our identities. These commitments, in turn, make new engagements possible (Shulman 2002, 39).

Cognition/knowing/learning is a continual, natural process of problem solving (Simon 2001). Couched in thinking and action, it is partially a concrete and partially an abstract process. Cognition is embodied in our physical/biological being through which it interacts with the environment, our senses through which information enters our system (i.e., touch, smell), our muscles and motor system through which the cognitive system acts upon the environment (i.e., hands, vocal chords), and a feedback loop connecting the two (i.e., a child learning to speak must be able to hear her own voice) (Heylighen 2010).

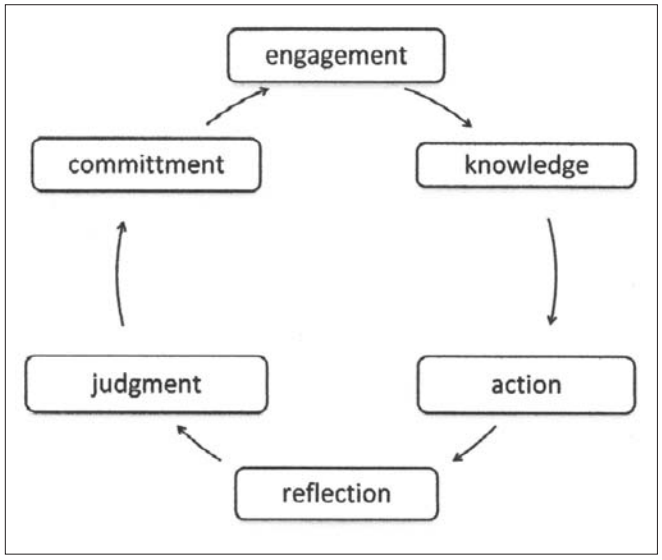

Figure 1. The Cycle of Learning

Language connects abstract reasoning with concrete experiences to construct understanding in our minds. An example is the analogous connection between the abstract concept of "boundless" to the concrete sensation of "sky" when we use the expression: "the sky is the limit" (Heylighen 2010). In another example five-year-old Alex's grandmother asked him what "cold" meant and he said it was a snowman. In fact, the snowman was so cold that if he hugged him, Alex would get cold and could get sick. A bigger snowman was even colder and could kill Alex, he said. Alex's mental model which included the experience of playing in the snow, building a snowman and feeling cold, connected to the grandmother's question, with which he engaged through metaphor, allegory, and story (Fuchs 2009).

In addition, as the great educational pioneer Comenius figured out in the 17th century, when concrete images are presented to the learner together with abstract words, understanding is enhanced.[8] We too have realized the importance of concrete experience to instigate, motivate, and elucidate learning:

> making and experimenting with physical objects (including drawings and notations) facilitates the learning of abstract concepts, as well as the generation of new insights that promote abstract thinking (Clancey 2008, 27).

The concept of dual coding emphasizes the role of the non-verbal, imagery subsystems (visual, auditory, touch, and motor) for reinforcing the understanding of language, showing that non-verbal and verbal codes in our minds have an additive effect on understanding and recall. Concretization and imagery enhance memory, so that "concrete memory exceeds abstract memory performance by a 2:1 ratio on average" (Pavio 2006, 4).

Our own studies and practice have led us to the arts as a vehicle for leveraging diversity in our classrooms to enhance imagination, expression, and understanding (Ben-Yosef 2009a, 2009b; Ben-Yosef & Pinhasi-Vittorio 2008-9). Children who engaged with varied arts experiences over time were found to be

> more confident and willing to explore and take risks, exert ownership over and pride in their work, and show compassion and empathy towards peers, families and communities. (Burton et al. 2000, 248)

Learning through and in the arts according to Fiske (1999, ix-xi) allows teachers to reach students who are not otherwise being reached, especially those who are disengaged and at greatest risk of school failure, to engage students in ways that are better suited to their learning styles and comfort zones, and to provide multiple new challenges for successful students who outgrow their established learning environment.

Structures that exist in spoken languages also profoundly impact the knowledge we acquire and the ways in which we perceive reality. An example are cultural concepts of gender characteristics given to objects in some languages that exert a powerful hold on speakers' associations (Deutscher 2010). In German a bridge is grammatically feminine and speakers tend to describe bridges as "beautiful, elegant, fragile, peaceful, slender," while in Spanish bridges are linguistically masculine and are described as "big, dangerous, strong, sturdy, towering" (p. 210). It is easy to imagine how such linguistic markers can impact a learner's understanding and expression.

On the abstract level, Weisberg (2006) outlined several characteristics of thought important for understand learning: Our thoughts follow one another in the order of having been experienced; our thinking processes are strongly rooted in past experiences and they change/grow incrementally away from the past toward the new (the concept of the Zone of Proximal Development or ZPD); our existing knowledge/concepts/expectations direct our thinking processes, thus, familiar events will be processed in our minds much more readily than unfamiliar events, which brings us back to the idea that new knowledge must connect to that which is already known.

In the Classroom

> Learning is an individual feedback process of connecting the concrete to the abstract using knowledge embodied and embedded in the learner and her environment. Bringing cognitive awareness into our pedagogy means teaching that is based on the way people learn best: 1) realizing that it is the learners who learn, who have to go through the cycle/process themselves (providing answers is not teaching) and make meaning of information as it relates to their existing schemas; 2) utilizing the concept of the ZPD regarding the incremental growth of knowledge from what one already knows to new knowledge; and 3) incorporating non-verbal elements and the arts can profoundly enhance imagination and possibilities in teaching and learning.

A Working Example

> Gallas (1991) incorporated arts into her 1st grade pedagogy as "a methodology for acquiring knowledge, as subject matter, and as an array of expressive opportunities. Drawing and painting, music, movement, dramatic enactment, poetry, and storytelling: each domain, separately and together, became part of [the students'] total repertoire as learners" (p. 40). This worked especially well for Juan, a student who had just arrived from Venezuela knowing no English. Through painting, modeling and constructing,

> Juan expressed his existing knowledge, what he desired to learn and what he actually learned, circumventing the obstacle of not knowing the language yet using it simultaneously. Gallas and Juan "built a reading and speaking vocabulary from his pictures, and that vocabulary, together with his interest in representing science, also became the subject matter of his writing" (p. 41)

Two issues come up at this point: representation and motivation.

Representation (frames of reference). In his book *Fish is Fish* Lionni (1970) tells the story of a fish and a frog who grew up together as friends in a pond. One day the frog jumped out of the water and lived on land for a while until coming back to the pond and telling his friend the fish about what he saw outside. He described birds and cows and people. But the fish, who had never been out of the pond, could only envision these things as they related to himself. So the spotted cow with four legs, horns and an udder, standing in the meadow chewing grass looked in the fish's mind like a fish with added characteristics. (See Figure 2)

A learning process involves enriching and elaborating our existing schema, or mental model, as we try to understand new information by connecting and relating it to the representation of knowledge already in our minds. When we encounter new information, we first try to break it down into smaller, knowable components (Simon 2001) that we can assimilate/accommodate into our existing categories. Lionni's fish broke down the frog's description of the cow to its components of horns, spots, etc., and related it to the knowledge already in his mind regarding "living creatures." This newly constructed knowledge, however, is misconceived.

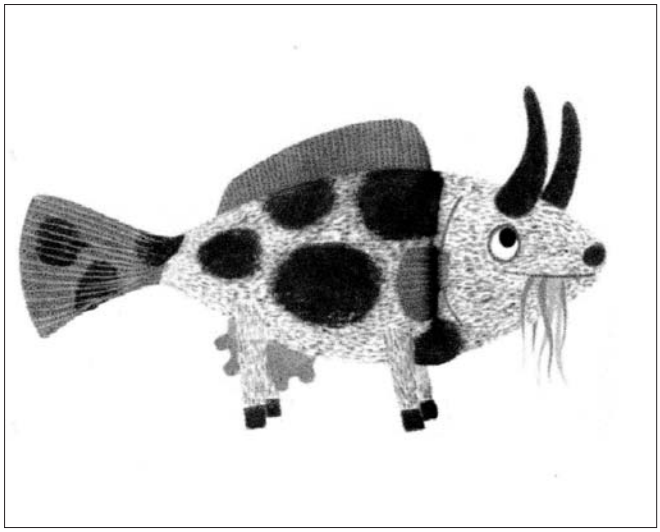

Figure 2. A Cow in the Fish's Mind

Sometimes our frame of reference may lead us to misconceptions. This happens when our mental models are flawed: They may not conform to accepted models; they may not have an appropriate level of complexity; or they may not have been incorporated correctly into the existing model (Modell, Michael & Wenderoth 2005). Since there is little likelihood that the fish will ever encounter a cow, its misconception may serve to enrich its imagination but will not cause it other learning problems. However, for students in a classroom misconceptions can interfere with understanding a topic and they pose serious challenges for the teacher. Within an Instructional pedagogy, teachers tend to discount a student who doesn't get it, relegate her to the group on the left side of the "normal" curve, and label her as inherently deficient. Within a Learning paradigm, the teacher's main concern is the student's learning and finding ways of recognizing the misconception and helping her modify her mental model to appropriately understand the issue at hand. It is important to note here that only the individual can correct or modify her own mental model, so passively providing "correct answers" does not solve the problem (Modell et al., 2005).

An Illustration

> An elementary school teacher was teaching fractions by using, what she considered to be a common reference, "a Thanksgiving holiday favorite: pumpkin pie." Well into the lesson, an African American boy asked: "What is pumpkin pie?" Most African American families serve sweet potato pie for holiday dinners, so it is their common referent. The young student who didn't know what pumpkin pie was, most probably was preoccupied with trying to imagine what the pie is like rather than focusing on the fraction lesson, leading to this child "not getting it" and beginning a slide in math (from Bransford, Brown & Cocking 2000, 72).

It isn't that some people don't understand; they simply understand differently. And while in some

areas this doesn't pose a problem, in schools it might. Again, an example from a children's book: *It's a Book* by L. Smith (2010) tells of two friends, a donkey and a monkey, sitting together and reading; the donkey is working on its laptop and the monkey is reading a book. There is a culture/language gap between the two readers with the donkey asking if monkey's book needs a password, can it blog? text? scroll down? where's the mouse? etc., and the monkey repeatedly responding "No, it's a book," which the donkey, of course, doesn't understand. Although donkey ends up reading the monkey's book, the story of *It's a Book* ends without mutual understanding. The thrust of this tale are the misconceptions of information and the barriers they present to communicating, understanding, and learning.

As a side note, the illustrator, Molly Leach, drew the monkey much bigger than the donkey leading to the inference that we have a generation gap here, something teachers should be aware of as they assess their own possible cultural misconceptions.

In the Classroom

> In order to facilitate an inclusive discourse for the various representations our students bring to class, we need to begin by asking learners to share their knowledge and thinking processes while providing them common experiences of moving from the concrete to the abstract so that everyone is on the same page. Teachers must be able to 1) determine whether their students have misconceptions about the material; 2) encourage students to realize the need for changing their mental representations; and 3) support the students as they make the necessary changes to their mental models to promote successful learning (Modell et al. 2005, 22).
>
> Dealing with representation and misconceptions is crucial for achieving success in teaching and learning. No less crucial is engendering an atmosphere within which the learners are motivated to take up the challenges put before them, risk making mistakes on the way, and feel strong and confident enough about their learning abilities to become what Doherty and Ketchner (2005) call "intentional learners": empowered to be in control of their education, owning their learning, and, ultimately, including themselves in any learning discourse.

A Working Example

> The physics teacher is introducing the concept of momentum. He knows that in order to grasp an abstract idea students will be helped by a concrete experience which will also equalize the starting point of learning for all students, so he takes them to the monkey bars. First he asks the students to hang motionless from one bar and try moving to the next bar with one hand. When they find this impossible, the teacher asks them to suggest solutions. They experiment and realize that they need to swing their body at the same time as moving their hand toward the next bar. This swinging push, the teacher explains, is called momentum.

Motivation is the natural capacity to direct energy in the pursuit of a goal and it is expressed by engagement with an activity. On the one hand, learning is a personal process that takes place at a specific time in a specific brain (no one can learn for us, correct our misconceptions for us, or force us to learn), so in order for someone to engage in learning, they must be intrinsically motivated to do so (Massa & Pinhasi-Vittorio 2009; Park 2006; Pinhasi-Vittorio 2009; Wlodkowski & Ginsberg 1995; Zull 2002). On the other hand, motivation to engage in learning is strongly tied to the learner's culture and life experiences (Is the student available for learning, or are there home/peer issues that are distracting her?), to the learner's interests and goals (Can schooling get her where she wants to go?), to the learner's emotions (Is the material appropriately challenging? Exciting? Is the classroom safe?), and to the learner's prior experiences of success. Research on motivation and reading engagement recognizes the importance of the social context of learning to increasing intrinsic motivation: social relationships, task values, home–school partnerships, freedom to control one's learning, practicing real-world literacy tasks and providing learning strategies (Rueda et al. 2007). Above all, learning is energized by success or the feeling of potential for achieving success.

Meltzoff et al. (2009) focus on the social nature of informal learning venues which offer forms of

mentoring, apprenticeship, and participation that maximize motivation and engagement tied to the learner's developing sense of identity. When Sagor (2002) wonders at the motivation of teenaged skateboarders who, with a success-to-failure ratio of 1/100 when learning new tricks, continue to struggle and persevere at perfecting their art, he finds that motivation to learn emanates from attempts to satisfy five basic human needs: feeling competent, belonging, usefulness, feeling potent, and feeling optimistic. Smith and Wilhelm (2006) added the need for immediate feedback and the relevance of the material learned to the learner's life. Thus, learners will be motivated to learn and be willing to persevere despite hardships and setbacks if they feel that they *can* achieve success and that the outcomes of the learning will be relevant and useful to their lives and identities.

Motivation is associated with control. Our brains work hard to stay in control of our body while feelings of loss of control lead to anxiety and fear, sending the brain into survival mode. Students who have no control over their learning in terms of content, style, time, or pace will most likely lose motivation because their own lives and interests are removed from the equation. But, if a "space of freedom opens before the person moved to choose in the light of possibility, she or he feels what it means to be an initiator and an agent, existing among others but with the power to choose for herself or himself" (Greene 1995, 22). The feeling of control over their own learning empowers learners to challenge themselves in ways that outsiders might not be able to, motivating them to keep trying.

Success, however, is the prime motivator. When we succeed at something we are energized to repeat the experience and to challenge ourselves even further. This ties in to the fact that learning is steeped in emotion since it is the emotion chemicals (adrenalin, serotonin, and dopamine) that modify the synapses in our brains (Zull 2002). When we are emotionally engaged we are motivated and vice versa.

An Illustration
(From the reading journal of an ESL college undergraduate)

> It was the first time in my life I read a book that was written in English. I was always afraid that will be too many words I would not know…. Read an English book always seems an invisible wall for me I never even try to break through… But I tried. I did not give up first this time. Then I realized this was not as hard as I thought it was. I was able to get meaning out of the book just like I was reading a Chinese book. This is giving me so much confidence in reading. It makes me believe that reading English is something I can do.

Efficient learners integrate their emotional reactions with their cognitive processing, constructing relevant intuitions that guide their future learning as it relates to basic survival instincts (Immordino-Yang & Faeth 2007). A student who makes a mistake and gets a big red X on her paper will in the future tend to disassociate herself from such "dangerous" activities both physically and mentally (stomach ache on the day of the test…). A student who receives a good grade will in the future look forward to more such challenges, improving her "survival" possibilities. Likewise, the more emotion-laden the stimulus, the more attention it gets from our brain, so we can say that emotion drives attention (Wolfe 2001). Attention, when it is *shared* with others, facilitates learning, so in classrooms where there are multifocal attention trajectories — teacher to students, students to teacher, and students to each other — engagement ensues (Meltzoff et al. 2009).

In the Classroom

> A safe classroom where mistakes, misconceptions, and misunderstandings are part of the learning journey, can be seen in the documentary film *Teacher Irena* (2010). The teacher asks a 3rd grader how much 70+10 is. His answer: 79. She responds (something like this): Yes, you thought I asked about 70+9 and your answer is correct, but let us see if you can figure out 70+10….
>
> A teacher who thinks that a failing grade, pointing out mistakes in front of the whole class (as happens often while students read aloud), or marking papers with powerful Xs, are all motivators "to try harder next time," must become aware of the role of emotions in opening or shutting down learning. Immordino-Yang & Faeth (2010) suggest three strategies for teach-

ers to cultivate and support the development of strong learning: 1) Control: fostering emotional connections to the material by allowing choices in learning and expressing knowledge (a play, a poem) and involving students in curricular decisions. When they are involved in designing the lesson, students are more emotionally invested in and attached to the learning outcomes. 2) Belonging: showing students respect by relating the material to their lives and interests and hooking into their passions, allowing them to identify with the material. 3) Success: designing open-ended activities that allow space for student creativity, risk taking, making mistakes and learning from them; safe spaces where emotional reactions tend to thrive and drive engagement, and engender intrinsic motivation to learn with pleasure and perseverance.

A Working Example

In a 12th grade history class the teacher had a unit planned according to the curriculum, but the students asked to learn about the approaching Veterans' Day. Realizing that there is no motivator as powerful as interest, this teacher scrapped his planned unit and substituted it with the topic the students requested. Students were asked to bring in personal stories connected to Veterans' Day from family members or acquaintances who were involved in current or past wars. The teacher then hooked into their ways of learning through media, putting together the lessons with film clips and YouTube selections, poetry, and a short story.

To showcase students' learning through learning outcomes the teacher encouraged them to respond in any way they felt comfortable, providing several options they could consider (or add to), such as writing up and presenting an interview with a veteran (could be recorded), presenting a photo gallery, conducting a poetry read-aloud or poetry slam. The teacher also provided phone numbers and addresses of veterans' organizations in the area for students to visit or contact in order to thank the veterans for their service, which turned out to be an exciting and emotional activity for the students.

Assessing the Efficacy of a Learning-Centered Classroom

In a learning-centered classroom we want to constantly assess our own work and that of our students in order to inform teaching, learning, and curriculum in real time. This assessment process should be functional and continuous, regardless of outside tests that are required. If necessary, criterion-referenced tests work better because they are sensitive to content learned, but if tests can be avoided, there are better alternatives: ongoing dialogue with the learners, assessing tasks within real world contexts, dynamic assessments (interviews with students), creating short/long term personal learning goals, assessing learning outcomes (i.e., poems, paintings, music or plays written or performed, presentations, etc.), portfolios, and the ability of students to transfer knowledge from one situation to another. All of these provide important indicators of learning that teachers can use to evaluate and fine-tune instruction.

Students will learn how to monitor their own learning through instruction about the learning process and by learning how to evaluate their own strategies and levels of understanding (Bransford, Brown & Cocking 2000). Teachers can assess their own teaching and curriculum through feedback from the students and by reflecting on their own work. Real time reflections can include a 2- to 3- minute writing exercise — for students and teacher alike — at the end of every class, listing things they learned during the lesson and thoughts/questions they may have. This activity is invaluable for its efficacy in pulling thoughts together while they are still fresh in the mind and for targeting misconceptions. For example, in one of our graduate classes in the school of education, students are asked to write a short reflection "What I learned in school today" during the last three minutes of each class. At the end of the semester they write a final (ungraded) paper titled "A journey of my mind" outlining the cognitive journey throughout the semester. This paper serves the students as a reflection on their own learning process as well as important feedback for the professor in learning what works and what needs to be changed. Similarly, a portfolio final gives graduate students the possibility of selecting papers, original writing/poetry and ideas from other classes and reflecting upon them. This requires students to

think beyond the current classes and integrate information and transfer knowledge.

Conclusion

There isn't a human being who can't succeed. If he can't succeed at one thing, he can at something else. If we believe that every person has the right to succeed, we will search every route to get there.
(Amira Yahalom, Principal, Tel Aviv School [Ben-Yosef 2003b, 270])

Realizing that *everyone* is able and willing to learn — be it the child from a foreign country or culture, a kid who refuses to look us in the eye, the class clown, the dropped-out, or those whose parents never come to the parent-teacher meetings — opens possibilities for providing meaningful educational experiences for our students. By constructing lessons on the conceptual foundations of a learning-centered pedagogy derived from the belief that all of us are worthy, competent human beings, lessons emanating from knowledge about how we learn best and predicated on active participation in learning, teachers can create safe learning environments where all students can achieve and succeed.

The most fundamental of our understandings is that learning is optimized in an emotionally, mentally and physically safe space, where everyone belongs, has a voice, and is accepted as they are. This is a space of dialogue and respect for outside knowledge, where there is a fine balance of challenge for the learners. It is a place where actions such as speaking and movement are an integral part of learning, and risk taking in thinking (making mistakes, uncovering misconceptions, and airing misunderstandings) is acknowledged as leading to understanding and growing one's mind. It is a space where teachers make every effort to know who their students are, their ways of knowing, and representation. It is a space where a partnership for learning is cultivated as teachers support and scaffold student learning through achievable steps, bridging between student knowledge and the curriculum.

Achieving success is the reward of teachers and students alike. It is a unifying framework within which feelings of safety are enhanced and motivation is engendered because when we succeed at something it makes us happy and floods us with reward chemicals and puts us in a mindset favorable to continue trying for bigger and better goals — maybe for building the castle together, as Fred and Lulu imagined in *The Magic Toolbox*. Helping a learner find and realize success, even in small or partial instances, enhances intrinsic motivation. Compare the different reaction of a student to a teacher saying "The first half of your work is excellent, now *we* need to fix and revise the second half" with "You received a grade of 50%."

When children were first put in schools, it was for the purpose of teaching skills and information they would find necessary to manage their lives as adults. Today, in large measure, teaching has become both the means and the ends of schooling, leaving many students to find their own way as best they can once they leave school. Obviously those whose parents can afford better education, higher SAT scores, and worldwide experiences for their children, have the winning tickets. However, shifting to a learning-centered pedagogy, where learners and their learning are both focus and agent, opens possibilities of engendering learning for every student, regardless of the resources at hand or the student's perceived academic abilities, ensuring that all students have a sense of belonging to the social fabric.

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Notes

1. Dr. Ratey (2008), a psychiatrist at Harvard Medical School, equates exercise to Miracle-Gro for the brain. He describes an intensive exercise program in Naperville, Illinois, School District 3, which brought about significant changes in academic achievement for the entire district, such as a 17% improvement in reading and comprehension at the end of the semester for students in the intensive exercise program, compared with a 10.7% improvement in the control group.

2. The Life Center Lifelong and Lifewide diagram shows that about 95% of our learning is carried out in other than formal institutions, See http://life-slc.org/about/citationdetails.html

3. For a fascinating audio-visual presentation of these isues by Sir Ken Robinson, see www.youtube.com/watch?v=zDZFcDGpL4U

4. For example, *Reading don't fix no Chevys* is the title of Smith and Willhelm's 2006 book on adolescent literacies.

5. Attard et al. 2010; Barr & Tagg 1995; Ben-Yosef 2006, 2008; Heath 2001; Lave 1985; Mattar 2010; Rust 2002; Siemens 2008.

6. Although all regular, required testing is still administered, teachers and students can cull information regarding individual learning outcomes for personal development.

7. Recognizing all the while, however, that our knowledge of brain/mind functioning at this point is rarely definitive or prescriptive.

8. Comenius published the first children's textbook to teach Latin in 1658 combining printed language and pictures.

The Social Context of Bullying

Mimi Yahn

Bullying is an interconnected continuum of behaviors linked to societal attitudes and expectations about aggression.

For the past decade or more, bullying has become a major topic of discussion, research, and even legislation across America. Social scientists who research the subject agree that bullying is a subset of aggression (e.g., Cowie & Jennifer 2008, 28-29; Espelage, Bosworth, & Simon 2000, 326; Espelage & Swearer 2003, 368; Farrington & Ttofi 2009, 2; Hamburger, Basile, & Vivolo 2011; Olweus 1995, 197; U.S. Department of Health & Human Services 2004, Module 2, 2; U.S. Department of Health & Human Services 2009). However, there is little else in the current research that offers a coherent, comprehensive, and uniform understanding of the underlying dynamics, the causes, and the societal influences of this unique form of aggression. In fact, there is not even a universally accepted set of definitions or criteria for what constitutes bullying.

The reason I began exploring this topic is because I am currently conducting a study tracking levels of bullying on primetime network television. In order to measure bullying, I first needed to find a clear and broadly accepted definition of what constitutes bullying. Instead, I found no clear consensus in what is still a developing field of study. Worse though, I found the approach to studying this social phenomenon was, for the most part, piecemeal and compartmentalized. Rather than studying bullying as a social phenomenon, most mainstream researchers appear to approach it as a finite, specific set of behaviors (for example, hitting, name-calling, and spreading rumors) with limited (if any) references to societal, cultural, or popular influences. Rather than developing a holistic understanding of this phenomenon as a dynamic continuum of aggression behaviors that interact with social influences, what has developed is a methodology that favors rigid, static definitions which are primarily dependent on each researcher's own conceptualization of what constitutes bullying and what can most easily be measured.

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I should point out that there are certainly researchers and practitioners who do, in fact, approach bullying with a more holistic conceptualization of bullying placed squarely in the context of social attitudes and influences. However, the purpose of this article is to address the "mainstream"; that is, those researchers whose work dominates the field. Because these are the researchers who are cited by such influential bodies as the U.S. Department of Health & Human Services and the Department of Education, they predominantly frame how schools, parents, practitioners, other researchers, lawmakers, and governmental agencies understand, address, and measure bullying. As for the minority of researchers and practitioners who are forging ahead with a broader, more meaningful understanding of bullying, my hope is that this article will help open the dialogue and space for these innovators to become more prominent and continue to make a difference.

Defining Bullying

Dorothy Espelage and Susan Swearer (2003, 367) pointed out that "the exact prevalence of bullying is difficult to generate as definitions and measures used across studies vary tremendously." Beyond measuring and studying bullying, they noted that "perhaps, the most challenging aspect of bullying prevention programming is reaching a consensus on a definition of bullying" (p. 368). Helen Cowie and Dawn Jennifer (2008, 1) wrote that "while there has been a growing worldwide interest in school bullying among practitioners, researchers, and parents and carers over the past 25 years, there is currently no consensus regarding its definition."

To further complicate matters, the U.S. Department of Health & Human Services (DHHS), through its Center for Substance Abuse Prevention and StopBullying.gov websites, offers oversimplified definitions in its online training and educational materials:[1]

> Bullying is generally defined as repeated physical, verbal, sexual, or psychological attacks or intimidation by one individual who is perceived as being physically or psychologically stronger than another. In a general sense, a student is being bullied or victimized when he or she is exposed, repeatedly and over time, to negative actions on the part of one or more other students. (DHHS 2004, Module 1, 2)

DHHS refers to a 2003 article by Dan Olweus, whose seminal research on bullying began in the 1970s, as the source for their definition. In the article cited, however, Olweus (2003, 12) describes the exposure to "negative actions" over a period of time as being "one definition." Since then, that fine point has been lost to most and the criterion that bullying consists of repeated actions carried out over a period of time, rather than *one of the definitions*, is now accepted by nearly everyone as a rigid determinant as to whether a behavior can be considered bullying. But what about bullying behaviors that only happen once? And how long a period of time is necessary before the behavior is considered bullying? Suppose a group of boys stuffs another boy into his locker, but it only happens once because the victim does not return to the school, does that mean the original act of aggression wasn't bullying? What about the person who posts a compromising and damaging video on the internet in order to shame and taunt her schoolmate. If the posting only happened once, does this mean the act was not cyberbullying? Olweus (2003, 19) himself

Definitions of and Criteria for Bullying: **A New Conceptualization**	
Definitions	Bullying is a form of aggression manifested through a range of behaviors that include, but are not limited to, physical, non-physical, sexual, verbal, visual, and relational antisocial actions. Bullying consists of the *motivation* (underlying reason or catalyst) of the perpetrator to overpower, control, subjugate, force into submission or otherwise dominate the victim coupled with the *intent* (purposeful action) to harm, intimidate, humiliate, terrorize or otherwise hurt the victim.
Criteria	*Both* the motivation for dominance and the intent to hurt *must* be present to constitute bullying. Bullying need *not* involve repeated actions; however, *harassment*, which is a form of bullying, does involve repeated actions or behaviors. Whether or not a victim is able to fight back does not determine whether a behavior or action is considered bullying. Bullying need not involve an imbalance of (explicit) power between the victim and the perpetrator. Bullying behaviors can be either provoked or unprovoked.

includes "attempts to inflict injury or discomfort" as a definition of bullying; an attempt to bully that is immediately prevented from continuing does not, according to this definition, change the fact that the attempted act was bullying. This obviously contradicts the stipulation that bullying must be repeated.

Olweus also maintained that bullying "entails an *imbalance in strength* (or an *asymmetrical power relationship*), meaning that students exposed to negative actions have difficulty defending themselves" (Olweus 2003, 19). This imbalance of power criterion is widely accepted by nearly everyone and holds that the perpetrator has more power than the victim, as described in the DHHS definition of bullying above. Researchers David Farrington and Maria Ttofi (2009, 8) go even further by stipulating that "it is not bullying when two persons of the same strength (physical, psychological, or verbal) victimize each other. Bullying primarily involves imbalance of power and repeated acts."

This narrow criterion does not address the complexities of the phenomenon. Like repeated actions over a period of time, the imbalance of power criterion ignores real-life experience. Not all bullying is perpetrated by dominant aggressors and not all victims are subordinate. In fact, it's becoming increasingly apparent to bullying researchers that there is a dynamic "diversity of experiences along the bully/victim continuum" (Espelage & Swearer 2003, 371) because bullies can also be victims and vice versa.

By focusing on rigid, compartmentalized criteria rather than underlying dynamics, we are in danger of losing sight of the bullying "forest." I propose a more holistic perspective that considers the power element, not as a criterion of behavior, but as two distinct types of influences: *explicit power* and *implicit power*.

Explicit power refers to the direct, overt relationship between the bully and the victim, which is generally most apparent. Explicit power is the accepted social dynamic between the bully and the victim: A sixth grade student may beat up a fourth grade student because age, size, and strength gives him the prerogative and power; a heterosexual girl might spread rumors about a classmate being a lesbian because heterosexuality gives the perpetrator the power and advantage; a man may coerce a women into a sexual act because gender gives him the power and the privilege. However, not all relationships involve explicit, overt imbalances of power nor does the obvious display of explicit power explain why bullying even occurs.

Implicit power, on the other hand, illuminates *why* the bully has come to understand that he or she has more privilege than the victim and the prerogative of dominance. There's no logical reason why age or strength or race or gender or sexual preference should be considered a reason to bully, hurt, subjugate, or otherwise presume power over another person. How is being stronger a more desirable attribute? It is only because our society, which is based on a dominance/submission paradigm of hierarchy, teaches us which groups are dominant and which are to be dominated. In other words, implicit power refers to the cultural perceptions of power which provide the conditions for explicit power by creating a climate in which bullies perceive their actions to be normal, acceptable social interactions or appropriate responses to their own fears, perceived threats or lack of understanding/empathy. Implicit power is what allows the explicit power behaviors to occur.

For example, the recently prosecuted cyberbullying case involving a heterosexual college student who recorded and posted to the internet his homosexual roommate engaging in sex with another man and which resulted in the roommate committing suicide (Glaberson 2012) had to do with the bully's homophobia rather than an explicit imbalance of power between the two men. The homophobia itself exists because the heterosexual dominant culture has deemed homosexuality a subordinate, deviant characteristic, and so the bully perceived his actions to be an appropriate response within the context of the dominant culture's marginalization of homosexuality. A great deal of bullying in schools targets children simply based on their differences from the dominant culture, even differences that may seem utterly inconsequential. There is no explicit imbalance of power when a child bullies a classmate with red hair; it is the implicit societal attitude that *difference itself* is subordinate — and sometimes threatening — to the dominant culture. So a child who is bullied because she has bigger feet than her peers is singled out not because of any explicit power imbalance between her and her tormentor(s), but be-

cause of the societal bias against difference which implicitly places power in the hands of those who match or conform to the dominant culture.

Treating the power element as a criterion of behavior determined by a static definition of imbalance rather than as an underlying social dynamic causes us to overlook bullying behaviors, as well. For example, in most cases, the bully does perceive himself or herself to be more powerful than the victim, which gives the bully the perceived "right" (whether conscious or subconscious) to intimidate or assault the victim. However, bullying is also a behavior engaged in by the less powerful as a way of competing with, countering or lashing out at the more powerful victim. For example, trauma can cause children to engage in bullying (as well as other aggressive) behaviors against those with more power; in fact, the failure of parents or teachers to give them the emotional/psychological help they need can sometimes cause them to target those authority figures. In addition, with the anonymity of the internet, increasing numbers of children (and adults) are engaging in cyberbullying against those who they perceive as *more* powerful.

The importance of understanding implicit power goes far beyond simply finding a more holistic definition of bullying; it goes to the heart of how we, as researchers, counselors, teachers, parents, and citizens, perceive bullying in relation to cultural norms. The unfortunate reality is that implicit power can render a class so invisible and normalized in their subordinate position that the bullying perpetrated against them goes unseen and unnoticed. This is very much the case with sexually-based bullying against girls and women. Notwithstanding the aforementioned DHHS definition which does include sexual bullying, the reality is that most bullying researchers do not include sexual bullying in their studies, surveys, or definitions. Yet evidence indicates this is probably the most pervasive and prevalent form of bullying.

According to a study conducted by the American Association of University Women (AAUW), "four out of every five students personally experience" sexual bullying (AAUW 2001, vi). Despite the fact that boys as well as girls are victims of sexual bullying, the social perception of sexually-based behavior is that there is nothing out of the ordinary or socially unacceptable: boys will be boys and girls will be victims. From a purely scientific view, this biased perception throws much of the data on bullying out the window. For example, DHHS reports that "between 15-25 percent of U.S. students are bullied with some frequency" (U.S. Department of Health & Human Services 2009), but how does that jibe with the AAUW study in which 80% of the students reported being sexually bullied?

Defining sexual harassment as a form of bullying is probably the most controversial concept in this article, and there are likely some researchers who deliberately exclude it as a bullying behavior. For example, Lyn Mikel Brown, Meda Chesney-Lind, and Nan Stein (2004, 9) argue that the "popular framework of bullying … both degenders harassment and removes it from the discourse of rights by placing it into a more psychological, pathologizing realm." On the other hand, British sociologists Wendy Parkin and Jeff Hearn link sexual harassment to both bullying and physical violence because of their shared attributes as human rights abuses:

> [W]e place the practices of sexual harassment into the context of and in relation to bullying and physical violence and to violation more generally…. Most literature and policy on harassment, bullying, and violence at work tends to compartmentalize each area … with little evidence of insight from one area influencing another. These three behaviors are still generally perceived as separate and nongendered…. [W]e view harassment, bullying, and physical violence as all violations to the person, with similar processes of recognition, silencing, and their interconnections. (Hearn & Parkin 2005, 92-93)

To separate sexual harassment from other forms of bullying is to degender the broader social understanding of bullying as being intimately linked to gender, not only in how the behaviors themselves are gendered, but in how society cultivates male-gendered behaviors of dominance, aggression, and bullying. Moreover, by keeping sexual harassment separate from the realm of bullying, by saying that sexual harassment has nothing to do with bullying, we reinforce not only the sanitized pathologizing of bullying, but also the notion of sexual interactions being a private matter rather than a social issue. If

sexual harassment is not about a person using sex to bully and subjugate another person, if it's not about wielding dominance in the most humiliating, dehumanizing way possible, then what is it about? The result of removing it from the continuum of bullying behaviors and failing to acknowledge the pervasive enculturation that engenders sexual harassment is that we allow it to continue unmeasured, unchecked, and invisible.

From a prosocial perspective, eliminating sexual bullying from data gathering surveys of students can be damaging. In a 2011 review of 33 bullying surveys by Hamburger, Basile, and Vivolo, only four surveys included questions related to sexual or gender-related harassment/bullying (one of which referred only to homophobic harassment). If the researchers themselves disregard such bullying, how are students to report it? Worse, this omission normalizes the behavior. For example, one of the surveys reviewed, the Gatehouse Bullying Scale (as cited in Hamburger et al. 2011, 17), includes the question, "Have you been threatened physically or actually hurt by another student recently?" Like the majority of the surveys, there is no suggestion or mention of sexual harassment or bullying. The problem with this omission is that children have been taught by adults to view gender-specific, sexual-based behaviors as normal and separate from abnormal bullying behaviors. As a result, a girl who's been abused or coerced or threatened by her boyfriend will be unlikely to report this because (1) she views this as just a normal relationship issue between herself and her boyfriend; and/or (2) the relationship may be no different from the ("normal") reality of her parents' relationship; and/or (3) she's ashamed to tell anyone.

As long as researchers themselves fail to recognize the full scope of the bullying phenomenon, they will be unable to gather truly meaningful data. Worse, by eliminating an entire category of bullying behaviors, they reinforce acceptance of the aggression as "normal," making it even more difficult for victims to recognize, name, and confront the abuse.

As the field has developed, so have the theories and understandings of bullying. For example, Nicki Crick and Jennifer Grotpeter (1995) challenged the long-held notion that it is primarily boys who engage in bullying. In a study of 491 elementary school children, they introduced the concept of relational aggression, which though non-physical, is simply another form of bullying considered more likely to be utilized by girls and involves using relationships rather than physical aggression to bully others. Though now widely accepted as a legitimate type of bullying, relational aggression is also far more complex, harder to recognize, and harder to untangle.

Once again, studies focusing on relational aggression fail to include bullying that has a sexual component. Espelage and Swearer (2003, 371) cite various studies showing that girls engage in relational aggression at higher levels than do boys. However, these studies only looked at behaviors that girls are more likely to engage in with their peers (e.g., spreading lies or rumors and exclusion from social groups). None of the definitions of relational aggression include the types of coercion, intimidation, and other forms of non-physical bullying that boys engage in with their girlfriends, including psychological abuse, threats, withholding affection, and various controlling behaviors. In fact, when behaviors are seen as related to males' sexual dominance of females, the behavior is no longer behavior, but rather an invisible part of the social background.

Sadly, the bullying behaviors associated with gendered interactions between girls and boys are so much an implicit part of our society that most bullying researchers can neither see that the behavior exists nor understand how implicit power engenders bullying. In the context of a society that encourages bullying behaviors as normal and even expected, children (and adults) will engage in bullying, not only as a normative social behavior, but as the only way they've learned to interact with those whom our society has implicitly deemed subordinate, including females, Muslims, lesbians and gays, nonwhites, those with red hair, small ears, big feet, glasses, accents, "strange names," and all the others perceived as different from the dominant social class.

The Holistic Approach to Bullying

The central problem with the current approaches to bullying is that they are lacking social or cultural context. Instead of understanding that the behaviors arise from belonging to a society that cultivates and shapes the behaviors, the focus has been on isolating

and quantifying readily recognizable symptoms (i.e., behaviors) of the underlying problem. In fact, the behaviors themselves can be as varied and ever-evolving as the perpetrators (cyberbullying is an example of evolving manifestations of aggression). The tendency to compartmentalize, to discretely structure or refer to a list of behaviors, in fact, prevents us from comprehending the phenomenon constructively and proactively.

This tendency has also resulted in bullying researchers looking at the phenomenon as a static, confined, and quite specific set of behaviors which has had the effect of *restricting* data collection, as entire categories of bullying are ignored and respondents are offered no opportunity to volunteer experiences beyond the researchers' perspectives. Moreover, there is no uniformity in the lists of behaviors, so each researcher, each survey, and each study measures a different set of actions based on what each researcher perceives as bullying behaviors. Most surveys fail to ask the question that looks at bullying from the child's point of view: "What other ways were you bullied?" How much more information could be gathered, and what a more comprehensive understanding of bullying we'd have, if all the researchers included that one simple question.

This focus on a narrow set of behaviors has also led to a commonly held assumption among bullying researchers that bullying behaviors peak in middle school, then decline in high school (Espelage & Swearer 2003, 372-373; Bradshaw & Waasdorp 2011, 48; DHHS 2004, Module 2, 3; and Espelage & Swearer also cite Nansel et al. 2001; Pellegrini & Bartini 2001; and Smith, Madsen, & Moody 1999). Not only can I find no evidence of this (in fact, the AAUW study shows the opposite, while other studies lump ages together in such a way as to make this determination impossible), but what stands out is how the behaviors *change* according to age group. In other words, bullying is not a static, finite set of behaviors; it is an *adaptive response* to social influences and ecologies.

Children change their behaviors to adapt to what is socially reinforced and what is socially unacceptable. But adapting is not the same as discontinuing, particularly in the context of social attitudes and pressures. In a society that validates aggression, aggressive behaviors will simply adapt to what the society teaches are the acceptable forms of aggression. So the stereotypical behaviors attributed to toddlers (e.g., hitting, biting, grabbing, and kicking) will change to the stereotypical behaviors attributed to grade school children (e.g., teasing, knocking over someone's lunch tray, hiding/breaking personal objects, exclusion from games or social groups, etc.). Toddlers who behave aggressively do learn that their purely physical aggressive behaviors are unacceptable as they interact with more of the world, so they adapt their aggression to more socially acceptable aggression behaviors.

In middle school, children begin learning adult social skills and replacing the physical aggressions of childhood with more subtle forms of aggression. Since middle school is considered the transition from childhood to teenage, it's no surprise that the aggressive behaviors of childhood decline, but the aggression continues in the form of behaviors that most bullying researchers are missing, particularly behaviors associated with sexual bullying. Society ostensibly frowns on young adults engaging in physical aggression (though it does so with a great deal of tolerance), but it does empower males to sexualize their implicit power over females, while females adapt to passivity expectations by adopting more covert bullying behaviors. Aggression is considered a male trait in our society, so the males simply adapt once again to a new paradigm: dominance and control in the form of sexualized, gender-dependent bullying. For females, aggression (and bullying) is all too often equated with power, and with power comes the promise of equal status in the world, or at least a lessened state of submission. Sadly, bullying does not taper off after middle school. From workplace bullying to the acts of aggression that we take for granted as unfortunate violence in our society, including stalking, rape, hate crimes, ethnic cleansings, and wars. These are not just acts of aggression; they are best understood as the worst kinds of bullying.

The biggest failure, I believe, in the attempt to define and measure bullying is the view that bullying is an aberrant behavior which can be rooted out with proper remedial programs in school. In fact, it is an interconnected continuum of behaviors intricately linked to societal attitudes and expectations regarding aggression. More importantly, in the context of a

society that promotes and cultivates aggression as a fundamental and essential trait — particularly of males — bullying sadly becomes a completely normal and predictable social phenomenon.

Future Directions

As Espelage and Swearer have noted, the lack of consensus in defining bullying is one of the greatest challenges to understanding the phenomenon of bullying. It is also one of the greatest obstacles to creating programs, policies, and a social environment to effectively address bullying. Since, for my own research, defining bullying is essential to measuring it, I realized that I would have to develop my own set of definitions and criteria that would be comprehensive, dynamic, holistic, and grounded in the awareness that bullying must be understood in the context of societal and cultural influences.

Bullying, first and foremost, involves domination as the *motivation* (what compels the person to act) and humiliation or hurtful actions as the *intent* (intentional act). Bullying, like any behavior, is adaptive so rather than attempting to compile a list of specific actions, it is important to understand the motivation and intent of the action in order to recognize new and adaptive bullying behaviors (cyberbullying is one such example). Repetition of actions is currently used as a determinant for bullying; however, this invalidates the experiences of those whose victimizations may have occurred only once. Moreover, this criterion places the responsibility for the attack on the victim: if the victim does not or cannot fight back, only then are we supposed to view the aggression as bullying. On the other hand, there is a type of bullying that is, by definition, repeated in nature: *harassment*. Just as bullying is uniformly considered to be a subset of aggression, I define harassment (repeated action) as a subset of bullying (See Table 1).

No matter what definitions are ultimately accepted as universal, bullying is not driven by random convergences of personality types and cultural micro-ecologies. Bullying is rooted in the society we all live in, and this is a society that values aggression and war over cooperation and peacemaking. For thousands of years, our world has presumed that war is the natural state, while peace is the exception. Even our language presumes this hegemony: "war and peace" is the standard phrase, not "peace and war." War — the ultimate aggression — is basic to our identity as nations, as citizens, and as heroes. Jan Maher, author of the play *Most Dangerous Women*, points out that most history books are filled with entries on wars, but few to none on peace, as if "war is an essential part of what defines the human race." A longtime educator, Maher says that asking history teachers how much was covered in a year will often yield responses like, "they 'only got to the Civil War,' or 'barely got to World War II,' or 'didn't have time to teach the Vietnam War.'…Years in which wars are not the predominant reality are referred to as 'between the wars'" (Maher 2006, 2).

In the context of a society that places great value on aggression, bullying can be too easily internalized by children as appropriate and socially validated behavior. It's no accident that hazing — the institutionalized face of bullying — has been well-entrenched in our military and educational institutions for centuries.

We need, for ourselves and especially for our children, a new paradigm in which peace is the dominant and desired social construct and aggression the exception to everyday interactions, for boys as well as girls. It is an ideal that is, in fact, lived and taught here and there, but the dominant culture intrudes on a daily basis, through television, movies, video games, newspapers, radio, the internet, friends, schoolmates, and families. It's no longer enough to simply teach peace to our children; we must also actively and purposefully *un*teach aggression, beginning with unteaching ourselves the forms of aggression and bullying that we've come to accept as normal.

We can teach our children to recognize and reject aggression behaviors, from gender prerogatives to glorifying violence; from fistfights to bullying. We are, I believe, fundamentally social, compassionate, prosocial beings. In recent years, there's been almost a harmonious convergence of studies, theories, and new social paradigms all centering on this notion. From Helena Norberg-Hodge's work (Norberg-Hodge, Gorelick, & Page 2010) illustrating the link between resilient community and human happiness to Charles Eisenstein's (2011) sacred economy theory, from Rebecca Solnit's studies of human behavior in the wake of disasters (Solnit 2009) to the dis-

covery of an "altruism gene" (Nedelcu & Michod 2006; Oregon State University 2009; Reuter, Frenzel, Walter, Markett, & Montag 2010), it is clear that humans feel most happy when we are in harmony with other humans, most alone and angry when we are in conflict with others, and that we feel most engaged with life, most fulfilled as human beings when we are helping others.

Though humans clearly have other tendencies — what some believe are base, antisocial instincts — we know that nature can be trumped by nurture. We don't have to let antisocial tendencies or instincts determine our social paradigm. As parents and teachers, we can interrupt those tendencies and antisocial behaviors in our children, while at the same time, cultivating, reinforcing, and strengthening the prosocial instincts and behaviors.

We may, at times, become mystified and discouraged at how children seem to absorb mainstream attitudes as if by osmosis; but it only takes a short while observing young children to see how attitudes form: the little boy who sneers at another for "acting like a girl" or the little girl who strikes a Betty Boop pose. Those children who learn such attitudes and societal expectations from their parents and siblings do pass them on to other children. We may, at times, wonder what compels our children to "go along with the crowd" even when that crowd becomes cruel or self-destructive. We are social animals and our children need to be part of a peer community just as much as any adult. But our society teaches us to conform to the group, while *valuing* individualism. Instead, we can teach our children to be individuals, but to *value* community. It is, after all, our contributions and connections to community that elevate and fulfill us. And so we can teach our children and ourselves that cooperation, respect, and equality are far more rewarding and make us far more powerful than the isolation and destructiveness of aggression. Most importantly, we can begin the conversation about dismantling our current dominance/submission paradigm that makes bullying so inevitable and replacing it with the world we've always dreamed of.

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Note

1. In describing DHHS' criteria for what constitutes bullying, I also reference researchers, educators, and others who use these narrow definitions (e.g., Bradshaw, Waasdorp, O'Brennan & Gulemetova 2011; Buhs & Guzman 2007; and Farrington & Ttofi 2009.

Revisiting School Reform Twenty Years Later

Bob Grandin

An innovative Australian school moved from a traditional curriculum to one that emphasized the meaningful activities of a working society.

In the nineteen eighties the term "disadvantaged" was used to describe young people from lower socio-economic circumstances, remote communities, different cultural backgrounds and disengaged from the schooling process. With time this classification became more focused on individual students with "social, emotional and behavioral difficulties" (SEBD). Most recently the term "mental health problems" is being used to describe those with issues within the schooling process. Whatever the term, it is recognized that there has always been a significant number of students who struggle to meet the "normal" standards of school performance and behavior. When there were unskilled jobs available, there were some job opportunities for students who found difficulties with schooling. However, the technological revolution within society has dramatically reduced these opportunities and governments have responded by raising the age a youngster could leave school and by attempting to provide a more varied curriculum to include all students. Still, increasing difficulties with student behavior issues, regular attendance, and declining performance standards illustrate that there is a need to reconsider the role of schooling within society.

This paper is built upon an intervention begun in 1984 in which a school, for "disadvantaged children" developed another way to deliver the curriculum. I have visited many of the former students of the school this year, more than twenty years later, and discussed their life histories with them. In this paper I will describe the principles upon which the school was organized, the processes that were used there, and the impact it had on the students' lives. The apparent success of the school offers a guide to how best provide for the needs of those students who struggle with the intensity of the traditional schooling process.

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The School

The school was situated on a dairy farm in Australia as an annex to a school some 300 miles away. This was found to be difficult to manage and the school was established as a school in its own right in 1984. The Foundation Principal came to the school with a mission to work with "unsettled" students. Over the next few years he changed the focus from an emphasis on daily classroom theory which was then applied to the farm to one that emphasized a wide range of adventure and work-based activities and limited classroom time. The activities were designed to motivate students to participate. The excitement of canoeing, abseiling, rafting, horse riding, and generally being outdoors seemed to be appealing to young people. Each activity was regarded as a learning experience itself and staff took the opportunity to focus on the academic principles that underpinned the experience. Engagement of the students increased along with enrollment numbers which grew from 70 to 200 in a few years.

Much has been learned about the way individuals learn over the past fifty years. The simple behaviorist pattern approach of the past has been complemented by a deeper understanding of different approaches to learning. However, mainstream schooling has predominantly remained wedded to the recall of information in an ordered way that still relies on testing of recall in a written form. This "academic" way of learning simply does not engage all children.

> I would not have finished school if I hadn't been able to come to this school. I can't sit behind a desk all day. We knew that the pain of our classes would be over by morning tea. (male former student)

> Couldn't live much in the classroom…. I was outside helping the yardman…. Best time of my life at that school, plenty of things to do. (Aboriginal male student)

> I would do anything to get out of written stuff…. After school I went to college and did a Tropical Animal Production Certificate and have never used any of it. (male former student)

Many wish to learn by doing, which includes learning through trial and error. It can be argued that this form of learning was normal before traditional schooling became dominant. Cottage industries thrived under an apprenticeship model of learning. Fifty years ago apprenticeships also provided the alternative pathway to schooling, in which those who were not able to cope academically transitioned to unskilled work or traineeships. However, more recently, the technological revolution has diminished the number of such unskilled opportunities. To remedy this problem, the Australian government has raised the leaving age of students and keeping those who do not have work placements within the schooling community. While some progress has been made to introduce practical elements into the curriculum, in general, it is still a theory-based approach. The government's desire for accountability in the expenditure of money on education has also introduced a standardized curriculum and common testing. Both these elements are at odds with the increasing diversity of students attending compulsory schools.

> The farm was great for work-making exercises that got kids interested…. It taught responsibility and commitment…. Agriculture and animals are a great way to have influence over [students] and expose them to life's lessons. (male former farm manager/teacher)

> I just loved the agricultural side of it … different to any other school I went to. (Aboriginal female former student)

The diversity of the backgrounds of the students attending the school illustrates the challenge facing society. The school enrolls students who are excluded from other more traditional schools. The initial population was predominantly Indigenous Australian, from Aboriginal communities throughout Far Northern Queensland, the Northern Territory, and the Torres Strait Islands. Within each of these groups there were a variety of tribal associations and cultural practices. Gradually more and more non-indigenous students enrolled in the school till they numbered half of the school. Students tended to come from remote locations and unsettled backgrounds. Many had a history of avoiding school or were subjected to different forms of school exclusion. Others had suffered physical or sexual abuse or economic deprivation. Because the student population was predominantly

drawn from remote communities, many also suffered from the disadvantages caused by isolation. Each had their own set of needs and ways of relating to others.

To balance this diversity in the student population, the criteria for staff selection emphasized worldly experience and practical skills. This was a significant challenge for the teaching staff and it resulted in a number of tradesmen being employed to lead the practical activity program. Specialists were employed for the adventure program in rafting, canoeing, and abseiling (rappelling). A trained horseman provided guidance in breaking horses, riding, and saddlery. The diversity of staff supported a mentorship program in which the students choose a staff member to be the one to whom they turned first in a time of need. These "family" groups could be as small as one person or up to a maximum of 15. Time was allocated each week for meeting, especially to arrange activities together, but it was well understood that students could access this staff member whenever they felt the need.

There was a range of transport available for programs. This began with a single Toyota Coaster bus, but soon was expanded to two of these 20 seaters, a large Bedford Bus that could handle 40, a Hino Bus to take 30, a Toyota 11-seat 4-wheel drive Troop Carrier and a Mazda tray-back utility. This fleet of vehicles meant that it was rare that a group needing transport could not access something. This "need" was often a response by a staff member that a specific group needed to leave the school and go somewhere unstructured for awhile — be it hours or days. Individuals could negotiate time out of school during which they worked alongside a staff member of their choosing. These approaches illustrate the desire to put the emotional needs of the children first. Experience illustrated that the students did not abuse this opportunity, but rather saw it as a way to control the tensions in their lives, be they relational or times of personal dysfunction.

Activity

The activity program was designed around the natural routines and requirements of a working property, but it is important to recognize that these principles and examples can be translated to other contexts, including urban settings. At another school activities included contact with the elderly, community support programs, light industry, markets (both for production and retail), community arts and crafts, and resources for youth, such as skatepark design and development. The essential concept is that the learning community should follow the natural way of life for the context within which it is placed.

Students could choose from a wide range of activities in vertically integrated groups. Choices were generally fixed for one term at a time, but any problem of functioning within a group led to the student choosing another group. This approach focused on students making decisions based on their own needs and was designed to develop self-esteem and intrinsic motivation. Farm activities included dairying, farm-based work projects, horticulture, stock management (cattle, sheep, horses), horsemanship, saddlery, leather craft, mechanics, driver training, building, and fencing. The adventure training included abseiling, canoeing, rafting, bushwalking, and camping. The size of a group depended upon staff supervision and a rotation system was often needed to cope with student demand. Staff time included planning and recording of routines with each activity to include elements of the curriculum.

An example of the latter approach can be illustrated through a cemetery visit. Groups would often discover older cemeteries from pioneering days when "out and about" on activities. A return visit would be planned and a range of "curriculum" activities be included in the outing. These might involve writing and researching tasks, such as recording information, creating stories from the headstone information, free writing on reactions or feelings, and historical research. Others might take a more mathematical approach and tabulate the data from headstones to investigate timelines and average ages. Rubbings, photographs, or drawings can reflect the Art curriculum. Group discussions might allow a staff member to draw out the reactions of the students to issues confronting early settlers, such as longevity, child mortality, diseases, accidents, and religion.

> There was a balance between curriculum and why the children where there. Open license, if the kids were not settled we would go for a bushwalk and make that the basis of a lan-

> guage-learning experience the next day. (female former teacher)

Classroom learning was reduced to five subjects that aligned with the activity-based context, staffing, costing, and perceived student needs. The subjects were English, Mathematics, Science, Geography, and Agriculture. Textbook learning was minimized, while the practical application of the curriculum would be pursued wherever possible. The consistency of these subjects created a flow through the five years of secondary schooling and were presented at the college entrance level. The legal minimum time of two hours per week was allocated to each subject; however, students were able to extend this time in private tutorials with their teachers. The academic curriculum was managed by having three lessons early each morning. The diversity of the backgrounds of the students meant that classes needed to be taught with differentiated methods and activities. This often led to self-directed processes as the students worked at their own pace. On most occasions class sizes were between 10 and 15 students.

The daily routine commenced at 8 a.m. (apart from milking at 5.30 a.m.) and usually ended by 5.00 p.m. Recreational activities included sports in season and a band. In hot weather a bus would take those who wanted to go to the river for a swim. There was a quiet time after dinner in which the students were encouraged to read, write letters, extend their class work, and generally relax. The extended day and high intensity routine meant that students were usually quite tired by the evening. Weekends were focused around voluntary activity and included adventure excursions — often associated with Duke of Edinburgh Awards[1], sporting teams, horse riding, and shopping in town. Students could take camping gear and camp away from the school if they wished, which was a popular activity. It was often the opportunity for a specific cultural group to be together. There was a high level of responsibility placed upon students within each of these contexts and leadership was encouraged. Frequently a dormitory group would take a bus and go camping together for the weekend.

The Process

The fundamental goal of the school was to create a relationship with each incoming student, based on a "family" approach. Each student was accepted for who they were and a range of people with whom they could relate was established. This included the principal as a "father" figure, the dormitory supervisor as the first line of authority and "mother"; an established student as a peer advisor or "brother/sister"; domestic staff ("aunties") as those who will be concerned with their health, food, and laundry, and the chaplain for spiritual comfort. The focus was on establishing a sense of belonging and attachment. Included in discussions was the sense of responsibility that came with being a part of a group and the principle that trust was developed through cooperation and participation.

> I remember the school as my family. I can only remember good things. (Aboriginal male former student)
>
> You guys are like parents…. Prepared us well for life. (male former student)
>
> Developed a relationship with kids while you were trying to act as an example to them. (Male former farm manager/teacher)
>
> Teachers were great to get along with … just the whole lifestyle, I found it more family … people cared. (Aboriginal female former student)

The other important premise was that activity would be a natural part of the school setting, meaningful, and focused on building skills. This was predominantly achieved through the working nature of the farm. As a commercial dairy, milk was collected daily, but to achieve this output a wide range of husbandry and rural maintenance activity was necessary. Students were either rostered (milking) or joined activity groups that carried out such chores as fencing, tractor work, irrigation, and maintenance. Other rural activities were managed in the same way, such as horticulture, sheep, mechanics, metal work, and building. A major focus was on horses. The introduction of a well-known horse breaker drew interaction with surrounding farms that contracted with the school to prepare horses for farm work. This involved developing a range of paddocks, yards, and equipment necessary to carry out this work. Students were involved at all levels. Apart

from the specific skills associated with each activity that developed competence, the students discovered self-reliance, problem solving, and adaptability when things did not always go as planned. Having responsibility for the task to which they were assigned in a "real" situation, they quickly recognized the trust that the instructor had placed in them. When there was a need for correction or punishment, work-related activities were seen as natural consequences. All these situations developed "life skills" for young people from a rural/outback environment.

> It prepared you for life — not much you could not turn your hand to. Gave you a kickstart in life. (male former student)

> I enjoyed doing the farm and things … different activities … more to life than just schoolwork … learning everyday life stuff, life skills. (female former student)

An example of the way the activity program developed a range of skills can be seen in the participation of 24 students in a Bicentennial Year ten-day horse ride from Maytown to Cooktown. This followed the historical route from the goldfields to the seaport. When they volunteered to participate, the students knew that it involved a six-month commitment. Horses had to be selected, trained, and cared for, which involved lengthy rides, overnight hobbling, hoof management skills (including shoeing), and general horse husbandry. Equipment had to be developed; old saddles were obtained and repaired; canvas swags were made for overnight stops; extra bridles were fashioned; hobbles designed and developed. Students recognized that they were responsible for themselves and their horses for the whole period.

> Put what they learn to a practical use. They can see that it is worth learning. It is not sitting them down and hammer, hammer, hammering them and at the end of the day there is just a piece of paper. Not actually saying to them that what they have learned has value. When it is practical they can see what they have learned has value. (male former horse instructor)

The adventure activity program was designed to challenge young people in a way that developed excitement, cooperation, resilience, leadership, and self-reliance. Challenges were designed to confront the adolescent, teach coping skills, and help them discover inner strengths. It was recognized that many of the students had come from environments where camping was a natural activity and that the outdoors was a place of escape. Building on this platform, abseiling, canoeing, and rafting were designed to provide more challenging skills and a sense of achievement. The Duke of Edinburgh Award[1] was introduced so that achievement could be recognized through focused activities and structured challenges. Like so much of the activity at the school, it also provided a platform to incorporate curriculum elements in a non-classroom context. For example, the building of canoes from molds incorporated both mathematics and science. These challenges remained strong in the student's minds many years later.

> Memories … Dorm trips, day trips, weekends, different areas for camping, horse sports. (female former student)

> Taught me a lot of things, abseiling, did this and did that, did Duke of Edinburgh, I regret I didn't finish it. I did finish it but didn't hand the thing in. I can describe all the things I done. (Aboriginal female former student)

Outcomes

A consistent characteristic of the later histories of the former students was that they were employed or in strong family relationships and many had leadership positions. Information on 50 former students indicates that 20% had a university qualification and 30% had tertiary/trade qualifications. Twenty-two percent hold positions of responsibility within Indigenous organizations.

The past twenty years have not been known for their economic stability. However, the former students have demonstrated high levels of resilience, moving from job to job, location to location, retraining as necessary. It is also interesting to note that they appear to be satisfied with their level of work, rather than continually trying for promotion.

> Make laminated beams … leading hand on the floor … baby sitter … still on the floor, don't want to go to the office. (male former student)
>
> I got to management but realized that I was so busy I would come home and say "hi" to my kids and they would look up and say "g'day" and go back to their game. I realized I was missing their lives, so I returned to a station job. (male former student)
>
> I moved to aged care as I just love the oldies. It is a bit tough at times, but regular and steady. (female former student)
>
> Happy to do what I am doing at work, I have no interest in moving up the food chain. (male former student)

It was also good to hear how many former students had maintained contact with their former classmates. There was regular contact for many on Facebook. Some would phone trusted friends from school when they needed advice or comfort. Birthdays often meant a gathering of former friends and visits without notice. Weddings were a time to regather as friends. A reunion at short notice attracted more than 100 former students and staff, with many complaining that there was not enough notice and looking forward to the next opportunity. The intensity of the memories was striking.

> I can remember more of the one year of being up there than the four years of high school. (female former student)
>
> Hard to explain to people about school friends that it was a different school…. We lived and worked together 24 hours…. On weekends we would find the teacher on duty and con someone to drive a bus and take us somewhere. (male former student)

Self Actualization

> *The goal of education must be self-actualization, the production of persons willing and able to interact with the world in intelligent ways.*
> (A. W. Combs in O'Connor& Yballe 2007, 738)

The expressed goal of the school was to help young people from unsettled backgrounds rebuild their self-esteem or, in other words, to discover their individual self-worth. The focus of relationships was to allow students to take responsibility and learn from their mistakes. In keeping with Maslow's view, "self-actualization is not an endpoint, but rather an ongoing process that involves dozens of little growth choices that entail risk and require courage" (O'Connor & Yballe 2007). The school provided the variety of opportunity that encouraged and allowed each student to discover who they were.

> Learning about themselves…. Find out who they are…. (male former horse instructor)
>
> We relied a lot on good communication … not sit down and say "what does this kid need." … This might be a chance for the staff member to talk and connect or to talk and let them get it out of their system…. I think it was quite effective with the clientele we had. (female former teacher)

In their approach to schooling, the staff at the school illustrated many of the ways in which writers explore the relationship between teacher and pupil in working towards self-actualization. "Good teachers … are able to weave a complex web of connections among themselves, the subject, and the student" (Palmer 1998, 11). There are endless ways to make these connections.

As teachers, we have a role as coaches (O'Neil & Hopkins 2002) in our students' being and becoming: extending a hand at the elbow, providing an imperceptible nudge, creating a climate of freedom and dignity, asking deep questions, challenging values, and calling for reflection. And our pedagogy must be appreciative (Yballe & O'Connor 2004), helping our students to be aware of their peak experiences and best moments. "There is a kind of I-Thou communication of intimates, of friends … which then enables others to see and appreciate the great artists and the great leaders" (Maslow 1964, 87). Our task is to help students become aware that they can have experiences of self-actualization and that they can build on them as the basis for a satisfying life and good leadership. We want students to better use the knowledge and tools they gain, and so we must also provide a positive and sustainable vision of leadership and life: the challenge and joy of the trip, collaborative working as if the future mattered, commitment to core values, dedication

to a higher purpose. It is "the heart's longing to be connected to the largeness of life" (Palmer 1998, 5).

The former students were a group of people who were in control of their lives, where choices were often made as a part of a "whole life approach" rather than compulsion or desperation. They illustrated the person described in O'Connor & Yballe (2007, 749): "You become a person who has needs, not a needy person." The students described fulfillment in their lives in these terms:

> Looking forward to being some kind of instructor, to pass my knowledge down. Devote some time to Manual Arts at the Bwgcolman School (Palm Island State School), give them the opportunities I didn't get growing up on Palm. (Aboriginal male former student)

> I work for mining companies as a negotiator with Aboriginal elders as they work out mining agreements. If it is a difficult one and I mention a few names that I went to school with, they see me as a different person in their minds and things become much easier. (former female student)

The schooling process moved from the arbitrary curriculum of traditional schooling to the meaningful activity of a working society. It focused on learning by doing, rather than learning theory and applying it later. It moved from an artificial to an authentic context. The "alternative" approach was focused on inclusion as distinct from the exclusion that the students had experienced in traditional schools. This occurred without the loss of future academic opportunity or being locked into a vocational approach. Building relationships focused on self-actualization created the potential to decide when and where choices could be made and what potential pathways could be followed.

Perhaps the most important response from the former students was that they wished that there was a school of the same type that they could send their own children to. They recognized the change that it brought to their lives and their enjoyment of such an authentic approach.

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Note

1. The Duke of Edinburgh Award (www.dukeofed.com.au) was introduced so that achievement could be recognized through focused activities and structured challenges. www.dukeofed.com.au

Mindfulness in Education

Wellness from the Inside Out

Amy Burke and Kevin Hawkins

Mindfulness is a practical skill that can help students enhance their academic experience.

Education should awaken the capacity to be self-aware. Life's pain, joy, beauty, love and ugliness need to be understood as a whole. The highest function of education is to bring about an integrated individual who is capable of dealing with life as a whole.
Krishnamurti

We have had the privilege of working in education for many years. Like most of our colleagues, we have always been curious about how best to reach our students. What could we provide as educators that can truly prepare them for the "real world?" What program or curriculum would best suit the needs of all our students as they make their way through the education system? Many programs, despite having the student's best interests at heart, seem to fall short of providing them with practical and sound practices for sustained success. That is, until now. Mindfulness as an educational tool is the most sound practice that we have encountered to encourage students not only to increase their academic achievement, but also their own social and emotional learning (SEL).

> SEL teaches the skills we need to handle our relationships, our work, and ourselves effectively and ethically. These skills include recognizing and managing our emotions, developing caring concern for others, establishing positive relationships, making responsible decisions, and

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> handling challenging situations constructively and ethically. (CASEL 2011)

In an age in which character education is in the forefront of many mandates, mindfulness is the key to unlocking students' potential to learn how to accept themselves and others and how to engage in the world around them in a constructive manner. It provides them with the tools to make healthy choices and decisions and to be responsive rather than reactive in daily situations. In short, mindfulness can help students create a more peaceful and more successful personal and professional life path — a path that will lead them to come to know and understand themselves and others better. Mindfulness helps students lead a fulfilling life in which they choose to cultivate peace and compassion rather than confrontation and competition. It also encourages individuals to find purpose and meaning in their own lives. Education should inspire this self-awareness and mindfulness practice can help students advance towards this goal. It can be as simple as incorporating focused breathing and body awareness exercises, moments of stillness, and even listening exercises into the classroom. Mindfulness practice can also take the form of a more formalized curriculum of specific class lessons. Mindfulness is the basis of a more conscious education where the needs of the whole human are integrated into the curriculum.

What is Mindfulness?

The simplest definition of mindfulness is that it is the practice of being consciously aware of the present moment. Jon Kabat-Zinn defines it as paying attention in a particular way: on purpose, in the present moment, and non-judgmentally.

Kabat-Zinn is generally attributed with introducing mindfulness to Western mainstream medicine as a secular approach to wellness and greater mental health. While working on his Ph.D. in molecular biology at MIT in the 1970s, he also learned to meditate and he realized that the same techniques he was acquiring could be used to counteract chronic pain. He persuaded the University of Massachusetts Medical School to set up a stress reduction clinic, which now, 25 years later, has evolved into the highly respected Center for Mindfulness in Medicine, Health Care, and Society. Kabat-Zinn created Mindfulness-Based Stress Reduction (MBSR) courses to encourage wellness in his patients, and many countries are currently embracing mindfulness within mainstream mental health programs to help people suffering from stress, depression, anxiety, eating disorders, and addiction.

The recognition of the profound effects of mindfulness has spilled over into other social realms. General Mills, for example, has implemented a Mindful Leadership Program to which they attribute much of their success. The sports world has also adopted mindfulness training as a way to increase performance. Former LA Lakers and Chicago Bulls coach, Phil Jackson (1995) in his book, *Sacred Hoops,* described using mindfulness in his coaching. Encouragingly, mindfulness even has a foot in the door of American politics. Ohio Congressman, Tim Ryan strongly believes that mindfulness is the key to creating a successful nation. His recent book, *A Mindful Nation*, explores how mindfulness practice can positively impact political divisions in Washington, support students on their educational journey, and encourage the entire country to reach a place where richer personal experience is the primary goal of living. Some provinces and states are already encouraging mindfulness programming in many school districts. Excitement is building because of the exponential growth in brain research surrounding mindfulness that is beginning to filter into education.

How Does Mindfulness Help?

With the advent of brain scans, evidence about the positive effects of meditation is becoming much more accessible. Recent Magnetic Resonance image research on participants in an eight-week MBSR course, for example, showed that some elements of brain structure were changed with an average of only 27 minutes of practice a day. An article in the *Journal of Psychiatry Research* (2011) reported that MRI analysis

> found increased grey-matter density in the hippocampus, known to be important for learning and memory, and in structures associated with self-awareness, compassion and introspection. Participant-reported reductions in stress also were correlated with decreased grey-matter density in the amygdala, which is known to play an important role in anxiety and stress.

In her *Still Quiet Place* training manual, Amy Saltzman (2008) noted that

> Initial research studies with patients with chronic pain and illness showed that participating in an MBSR course significantly decreased stress, anxiety, pain, depression, anger, physical symptoms, and medication usage. Participants in MBSR courses also showed an increased ability to cope with pain, and felt their lives were more meaningful and fulfilling.

There are numerous other studies that demonstrate the physiological and emotional benefits of mindfulness that can be found on the web. A recent publication entitled, "Integrating Mindfulness Training into K-12 Education: Fostering the Resilience of Teachers and Students" (Meiklejohn et al. 2012) delineates some of the most recent mindfulness programs in education and provides some research-based results.

Mindfulness in Education

Amy Saltzman, a facilitator of the Association for Mindfulness in Education, has observed (2010) that

> One of the primary ironies of modern education is that we ask students to "pay attention" dozens of times a day, yet we never teach them *how*. The practice of mindfulness teaches students how to pay attention, and this way of paying attention enhances both academic and social-emotional learning.… Students are being diagnosed with depression, anxiety, ADHD, eating disorders, cutting, addictions, and other self-destructive behaviors at epidemic rates. Cruelty, bullying and violence are on the rise. Most, if not all, children could benefit from learning to focus their attention, to become less reactive, and to be more compassionate with themselves and others.

At a time when there are growing concerns about many children's capacity to pay attention and exhibit positive emotional regulation, courses in mindfulness may have the potential to help students build inner awareness and focusing skills (Hawkins 2012).

In addition to these laudable skills there are also other important benefits to mindfulness practice that have applications outside of the classroom. In addition to the skills of attention, focus, and concentration, individuals who practice mindfulness gain an enhanced awareness of their inner self. In a world that espouses external rewards and excesses as the attainment of success, access to one's inner wisdom is rarely addressed. However, this type of knowing can inform a student about making healthy decisions and determining their future pathways. Character Education is a recent attempt to encourage a values-based curriculum. However, according to a recent study (Institute of Education Sciences 2010), Character Education courses do not correlate with the actual development of character; in fact, in some cases there was a negative correlation. The beauty of mindfulness courses is that they are not just about being taught character, but are actually about exploring and experiencing your self from the inside. Experiential learning involves tapping into our other intelligences. Our capacity for social and emotional learning resides not only in our heads but also in our hearts. Many cultures have long known that engaging the heart and intuition are valid ways of knowing, but our educational practices have shied away from embracing the knowledge of the heart.

Some of the latest buzzwords in education include "character development" and "critical thinking." For deep learning to take place, the first requires experiential learning while the latter requires students to trust their own judgments. Both are expressions of instinctual and intuitive knowing. These are worthy goals but we are falling short of serving our students as effectively as we could when we teach these skills if we do not take into account the fact that knowing is *internally referential* (Palkhivala 2008). Education systems have predominantly supported *externally referential* learning. We have learned to establish our individual worth by comparing ourselves with others. We make sense of ourselves only by referring to external standards. The education system, steeped in a predominantly competitive culture only exacerbates a student's tendency to be externally referential. Mindfulness practice enhances a student's ability to become internally referential because it allows them to gain access to their own inner wisdom. Educators want their students to think for themselves. We encourage critical thinking but we leave out its most im-

portant aspect: the ability to not only hear but to trust one's own inner voice.

Aristotle recognized that all human beings want to be happy. Viktor Frankl supported the idea that contentment is derived from having meaning in one's life and that meaning is derived from purpose. Every individual has a purpose to his or her own life. As teachers we are of most benefit to our students when we encourage them to unveil their own purpose so it may guide them to a life of meaning. We must empower them so that they ultimately are able to refer to their own inner wisdom, without depending on any external authority — yes, even ours. This inner wisdom can bring them contentment and empowerment as they learn to trust their own instincts.

Mindfulness practice offers a practical skill by which students can enhance their academic experience. It is the foundation of a more conscious education because it is a vehicle by which a student can gain access to his or her own inner wisdom. In learning to be consciously aware of the present moment, we become open to a profound understanding of our own self. Kabat-Zinn (1994) states that mindfulness has to do with examining who we are, with questioning our view of the world and our place in it, and with cultivating some appreciation for the fullness of each moment we are alive. When we cultivate the capacity to experience this inner knowing, we are also enhancing our own character development and employing critical thought. Listening to the self cultivates the ability to respond rather than to react to a situation and thus requires us to think about our actions on a moment to moment basis, as well as on a grander scale of making life choices. It teaches us how to act and how to think with clarity and compassion.

Mindfulness not only helps students in their academic endeavors, it facilitates a student's ability to direct his/her life in their own way, one moment at a time, creating meaning through purpose. It supports the highest function of education: to bring about an integrated individual who is capable of dealing with life as a whole. It's an idea whose time has come.

Online Resources

- The Hawn Foundation (www.thehawnfoundation.org)
- Association for Mindfulness in Education: Still Quiet Place (www.mindfuleducation.org)
- Mindfulness in School Project-.b (http://mindfulnessinschools.org)
- Learning to Breathe (http://learning2breathe.org)

Programs for Educators

- CARE (Cultivating awareness & Resilience in Educators) (www.care4teachers.org)
- Naropa University's MA in Contemplative Education (www.naropa.edu/academics/snss/grad/contemplative-education-low-residency-ma/index.php)
- Centre for Courage and Renewal (http://couragerenewal.org)
- Garrison Institute Initiative on Contemplative Education (http://garrisoninstitute.org)

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mote social and character development and reduce problem behavior in elementary school children.

Note

Amy Burke, Kevin Hawkins, together with Kara Smith, have created The Mindwell Foundation, which is committed to helping school communities develop social and emotional well-being through mindfulness.

Conversational Pedagogies And the Gift of Diversity

Jim Parsons

The success of our classrooms should not be measured by summative evaluations of learning content, but by whether we break down barriers and welcome the learning of those who have been on the margins.

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Something is changing in schools. Teachers are teaching differently and students are learning differently. On the surface these changes seem to gather around the warming pedagogical fire of student engagement with the curriculum, more active learning, and the acceptance of different learning styles. Phrases like right-brain/left-brain, assessment for learning, and inquiry- and problem-based learning characterize these changes. Educators are coming to accept the reality that students are different in many ways by nature and desire and are coming to accept those differences in our classrooms.

But, at a deeper level, the changes creeping into schools are philosophical. At this level, teachers are asking how we value each other as humans. Perhaps we are beginning to resist the self-colonization that has been so much a part of our history. The changes we are seeing represent a stand against educational hegemony. As a culture, we have been almost xenophobic in our wish to eliminate differences through education. We have long shaped learning towards an ideal, but now we are beginning to recognize the value of difference. The old education of hegemony — driven by what on the surface may seem like non-political actions like summative assessment (high stakes testing being one form of social and cultural domination) — has demanded the homogenization of education by beating down human differences through cookie-cutter prescriptions that have as their goal a final product that is white, middle class, and materialistic. We have been colonizing ourselves.

At their core, all curriculum changes are political. If this is true, we need to ask what political perspectives are embedded within conversational pedagogies,[1] which flow from the belief that we cannot and should not solve *problems* of difference by

eliminating them by imposing one dominant pattern that derives its energy from our view of education based on a middle class ethos. Instead, these curriculum changes are rooted in the belief that differences of race, gender, age, language and ethnicity, social and economic status, and other cultural differences are not problems to be solved, controlled, or reshaped by a dominant group, but rather need to be promoted and honored to insure that diversity will continue and serve as a model for new communities.

There are many good reasons we should want to embrace differences. Basically, however, how we react to student differences through policy and how we act in the classroom will shape the communities we hope to create and how we believe those communities might empower those who live within them. Curriculum has always been about thoughtful community building and the educational challenge will be defined by how we build commonality amid difference. Community building is not only an educational challenge, it is the very challenge of democracy itself (Hardt & Negri 2004, 100). The new communities we are beginning to build in schools are fueled by the diversity that adults and children bring to them.

Diversity allows new voices to be heard and new ideas to flourish. The new curriculum changes augur openness and inclusion. We want to include everyone into our school communities. The philosophical message implicit in the new curriculum is a critical response to growing world domination by a single economic empire as well as by our acceptance that people should grow more globally connected. We accept that there are differences, but we no longer see them as problems; instead, they become opportunities for insight. We choose to no longer fear difference and respond to it by shaping a cultural ethos of conformity. We have come to believe our communities would be better served if we no longer want to look, think, or want the same.

Accepting diversity opens the door to wider understanding, which helps people of all cultures better understand each other, not *regardless* of differences but *because* of differences. Community (common unity) is a powerful goal that will not result in smothering difference through uniformity; instead, communicative communities build understanding by hearing the dialogue of many voices.

Dialogues hold the promise of common unity, but the gift of unity must reside in diversity. Unity is expressed in the human need to share gifts and accept those of others. Schools allow us to discover that, although there are real differences among us, these differences are gifts. We no longer want our curriculum to teach everyone to become like us; we want them, through their differences, to change and expand the "us" into some new possibility we have not yet experienced. And we choose this not through fear, but through promise. We choose to embrace our differences because we realize we are not separated by them as much as by our refusal to embrace them and to eliminate our fearful belief that these differences will limit our own behaviors and expectations.

Our educational goal for our young has until now been to homogenize diversity. But we are beginning to realize that our tendency to homogenize diversity has enslaved those among us who, through ability or placement, would be destined to live in our shadow. Their diversity simply didn't fit with ours. Our schools are now fundamentally asking whether there might be a different kind of unity based upon a universality that no longer seeks to eliminate differences or centralize localities by submitting them to the worship of one ethos.

Individually and together we reside in the tension between what James Luther Adams has seen as the opposing virtues of unity and diversity (Stotts 1998). This tension connects unity through relationship and, by doing so, works toward justice and reconciliation, the political activities at the heart of the new pedagogies beginning to inhabit our schools. It is no longer possible for educators to naïvely believe that community can be established without paying attention to issues of justice — even within our own schools. If we cannot live justly here, how can we promote justice anywhere else? Social justice must be part of the agenda of 21st century education, and that means that we must start in our schools. In our schools, unity and diversity are no longer acceptable dualisms. Instead, they are ideas that encircle all those seeking voice and opportunity to be heard using their own language and interests.

Our old system of education, which sought to build unity by limiting diversity, no longer works. Diversity is not an enemy; it is a major reality and an

element of resistance to global capitalism and economic, political, and cultural homogeneity. The old educational paradigm is based upon dualistic structures and policies of domination: one either passes or fails a set curriculum, and is or is not filled with authorized knowledge, skills, and attitudes. This paradigm and the curriculum of conservation it engendered best served those working to accumulate power over others by defining unity as a zero sum game in which some lost their dignity and humanity and others won. Such activities are no longer acceptable in our schools. Schools must seek the full humanity of others as their working ethos.

My point in this article is that the work has already begun. We are reshaping our curriculum and teaching in ways that eliminate dualistic thinking that assumes we can have either unity or diversity, but not both. Although they seem like mere curriculum changes, they are revolutionary. They are changing our belief that unity may only be achieved by co-opting or destroying differences, or, in the case of our schools, by hammering differences out of people.

These curriculum changes establish an alternative paradigm for our schools and classrooms. That paradigm begins with our desire to welcome into our classrooms all persons of difference with a unity rooted in hospitality. Hospitable communities are not uniform. Hospitable communities celebrate differences, not sameness. Either-or, right-wrong, win-lose, or in the case of learning — success/failure — are replaced by more inclusive expressions. Hospitality in community shares an openness that welcomes all. It assumes that unity and diversity belong together.

Our curriculum must no longer be xenophobic. Instead of fearing difference, we must build hospitality. In Greek, *philoxenia* is the word for hospitality: it literally means "love of or friendliness towards strangers." It understands hospitality as a catalyst for creating and sustaining learning communities. *Philoxenia* is the opposite of *xenophobia,* "fear of the one who differs." Schools must be our society's hopeful invitations to build communities of learning that bring instructive differences together. These communities are probably difficult to construct, but we can no longer work towards "easy unities" built on compliance. School communities must allow "others" to fully engage the gifts of their diversity.

Classrooms can and should be places that welcome those who, for whatever reason, have been excluded from society's educational hospitality. As teachers, we must teach children to be less fearful of differences and more open to engaging and welcoming others. Such engaging spaces of hospitality will never remove tension, disagreement, or pain. However, embracing the diversity of the other helps us focus on tasks of justice, service, and responsibility we might engage together. As we welcome others who differ in contexts, ideas, and experiences, we learn many new ways to understand and build community.

Building on the gift of diversity helps us focus on mutual understanding and social justice. Appreciating the gift of diversity helps us build schools where diverse races, classes, or abilities can explore and engage different perspectives, relationships, and lifestyles. Hospitable schools are schools where people learn from each other. Hospitable schools seek to build futures that struggle together for each other. Hospitable schools welcome everyone. The test of our classrooms will not be measured by summative evaluations of learning content, but by whether we break down barriers and welcome into learning those who have been on the margins.

Our old dualistic power struggles, where diversity was ignored or seen as threatening, are receding. Our new classrooms promise to work through differences without demeaning or considering anyone unimportant. The need for unity is basic. Communities of understanding must be built even in the midst of tension. Diversity is also basic and, instead of beating diversity down, we should be inviting it in. We should want to hear as many voices, cultures, and ideas as possible. We should hope to hear from and learn from the diversity of others. Only our willingness to listen and learn together will allow us to discover unity in diversity.

Hospitality must also fundamental. We must welcome marginalized learners. We do not need to apologize for practicing hospitality. Hospitable schools practice social justice, peace, and wholeness for all learners. In hospitable schools, we live out our faith in society's institutions. The call to unity is an *impossible possibility*. As teachers, our classrooms are torn by differences seeking to incarnate wholeness. We live the impossible hope that one day we might unite

those who seem so separate. If we can successfully build communities amid diversity, we will have learned to live together. In those classroom moments when unity happens, we are reminded that teaching is indeed a wonderful vocation.

Note

1. Conversational pedagogies include those that encourage natural and regular conversations between teachers and children and between children and children. The purpose of these conversations is to direct learning; however, to direct, teachers discuss what is being learned, what that learning means to the student, where that learning might bear fruit, and what process is being used to learn. They are conversations of professional caring with goals of learner and teacher metacognition. Students are learning who they are as learners — what they hope to learn and how they best do it.

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Missing the Kindergarten Year

The Implication for First Grade Literacy Performance

Evelyn A. O'Connor

Children who do not attend kindergarten are at a disadvantage compared to those who do.

By the year 2000, all children in America will start school ready to learn.
(United States Congress 1994)

Because President Clinton's Goals 2000 initiative funded early education and school readiness programs, it was assumed that attending preschools supports the goal of learning to read on grade level by third grade. Even today, President Obama has a zero-to-five plan which emphasizes education and support to children before the age of five and their parents, so that children will be ready to enter kindergarten (Obama & Biden 2008). There have been successful early intervention programs, such as the Carolina Abecedarian Project, Head Start, and the Perry Preschool, that have targeted high-risk children from low socioeconomic backgrounds. The Carolina Abecedarian project significantly increased reading and math achievement for high-risk students and these gains were maintained over time, even when the children were assessed at the age of 21 (Campbell, Pungello, Miller-Johnson, Burchinal, & Ramey 2001). Head Start has been shown to improve vocabulary, letter naming, and pre-academic skills (Puma et al. 2010) and the High/Scope Perry Preschool program had higher scores on achievement tests (Schweinhart & Weikart 1999). These results demonstrate that quality programs are the key to supporting children's academic success in the early years.

But preschool is only one of the tools needed to support literacy development. As preschools have been highlighted, kindergarten has been neglected as an important foundation for literacy preparation. Vecchiotti 2003, 1 observes that

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> kindergarten is a pivotal transitional year in which children learn foundational skills and develop knowledge necessary for academic success in the early grades. Considering this crucial role, it is surprising how often kindergarten is overlooked when research and education policy agendas are formed.

In the United States, 36 states do not require kindergarten attendance before starting first grade (Education Commission of the States 2008), even though kindergarten is seen by educators and researchers as an important and valuable investment because one of its primary goals is to prepare children to read and write (Denton 2000; Snow, Burns, & Griffin 1998). Fortunately, almost 98% of the children in the United States attend either a half-day or full-day kindergarten (Education Commission of the States 2004). Of concern is the two percent of students who do not have the social and educational opportunities that kindergarten provides. West, Denton, & Reaney (2000) followed 22,000 students during their kindergarten year and found that by the end of the year the children had gained a higher level of knowledge and skills in math and reading, regardless of their background or type of kindergarten program. Even the amount of time spent in kindergarten has been shown to have an impact on achievement. Researchers have found that children who attended a full day of kindergarten had a higher level of growth in math and reading than children who attended half-day (Lee et al. 2006; Votruba-Dizal, Li-Grining, & Maldonado-Carreno 2008).

When Friedrich Frobel opened the first kindergarten in Germany in 1840, it was a place for young children to play, develop social skills, and transition to school. Today's kindergarten experience serves these purposes and more. Increasingly, kindergarten has an emphasis on academic performance, especially providing the literacy foundation children will need for success in first grade (Snow, Burns, & Griffin 1998; West, Denton, & Reaney 2000).

> Whether the result of parent pressure or the push to improve student performance on standardized tests, curriculum expectations of older children have been pushed down to earlier grades. Children entering kindergarten are now typically expected to be ready for what previously constituted the first grade curriculum. (National Association for the Education of Young Children 1995, 2)

Furthermore, the foundation that kindergarten provides is not only academic; it also is social and psychological. "Whatever the child has been able to learn before he comes to school, his prior learning goes through some transitions strongly influenced by the particular opportunities he is now exposed to by that school" (Clay 2005, 8). Children who have attended kindergarten have had a year to adjust to the school and classroom environments, learning the rules, expectations, and socialization skills. It would appear that those children who do not attend kindergarten are beginning school at a disadvantage.

It is important to determine the effects of missing kindergarten, especially its impact on reading and writing development. Studies that examined the impact of non-kindergarten participation on later achievement have found that students in the upper grades who did not attend kindergarten demonstrated poorer performance in math, language, and reading than those who did (Paterno 1984; Woodruff 1980). Therefore, we need to examine the association between kindergarten attendance and literacy development in first grade. We also need to determine whether children who do not attend kindergarten show a spontaneous catch up or a widening literacy gap; as Clay 1979, 13 puts it, "There is an unbounded optimism among teachers that children who are late in starting will indeed catch up." However, this optimism may be misplaced. Juel (1988) followed a group of first graders through the fourth grade and found that children identified as poor readers in first grade remain poor readers in fourth grade. Children who fall behind in reading usually need special assistance that goes on for many years, at high financial cost and limited success in closing the literacy gap.

Many researchers are investigating the factors that would help identify, early on, children who are in need of support in literacy (Bishop 2003; McCardle, Scarborough & Catts 2001; Scanlon & Vellutino 1996; Torgesen 1998). However, current research has not investigated the impact of kindergarten enrollment on literacy performance in first grade. Even though most children attend kindergarten, because it is not manda-

tory in many states, there are children who begin school at first grade. So the author did a small study to determine whether kindergarten enrollment impacted students' literacy development in first grade. By examining the literacy scores of first graders in the fall and spring semesters of first grade, the author wanted to determine if a gap exists between those who attended kindergarten and those who have not, and does that gap remain stable, increase, or decrease over time?

Literacy Progress: Kindergarten Enrollment Versus Non-Enrollment

This study examined the literacy scores of 20 first graders, 10 who did not attend kindergarten and ten who did attend kindergarten from a public school in New York City. The children who did not attend kindergarten were matched with a child who did attend kindergarten. The children were administered the Early Childhood Literacy Assessment System (ECLAS) (Board of Education of the City of New York, & CTB/McGraw-Hill 1998), an assessment that was developed to monitor the literacy progress of children. Teachers collected the ECLAS data for children in grades K-3 in the fall and spring. The ECLAS was devised to measure four strands: reading, writing, phonemic, and alphabet/sight word skills. The reading strand first assesses pre-reading activities (i.e., concepts about print and environmental print). Children are then asked to read a series of progressively more difficult books to assess their comprehension and decoding skills. For the writing strand the children are asked to write about the book they read for the reading strand. The teacher then assesses the child's writing mechanics (e.g., directionality, spacing, punctuation). In the phonemic awareness strand the child's ability to identify and record the sounds they hear in a series of dictated words is assessed. The alphabet/sight words strand assess the child's ability to identify letters by name and sound, and later, sight words. Children are classified into one of six levels of development: (1) Getting ready to read and write, (2) Emergent reader/writer, (3) Beginning reader/writer, (4) Developing reader/writer, (5) Semi-independent reader/writer, and (6) Independent reader/writer.

Means and standard deviations were calculated for fall and spring scores for kindergarten and non-kindergarten students in the four areas (i.e., alphabet, phonics, reading, and writing). Two-tailed t-tests were conducted to determine whether the differences in means were statistically significant.

An analysis of the data indicates that the scores for children who start first grade without attending kindergarten had lower mean developmental scores than children who did attend kindergarten upon entry to first grade (see Table 1 below). These non-kindergarten children on average continue to remain behind the group that had attended kindergarten even after first grade. In addition, when one looks at the individual cases, 4 of 10 students who started off with a ratings of 0 (no correct answers) and/or 1 (getting ready to read and write) remained below the others who attended kindergarten in the ranking even at the end of first grade, with scores that placed them at level 2 (emergent reader/writer), 3 (beginning reader/writer) or 4 (developing reader/writer) in most of literacy areas compared to those who had attended kindergarten.

A two-tailed t-test was conducted. An analysis of the fall entry scores on the ECLAS indicates that there was a difference in phonemic skills. This difference was statistically significant $t(9) = -2.684$, $p < .05$. An analysis of the spring ECLAS scores shows a statistically significant difference in alphabet knowl-

Table 1. Development Level Scores for the Four Strands on the ECLAS in the Fall and Spring

	Fall				Spring			
	Non-Kindergarten Attendance		Kindergarten Attendance		Non-Kindergarten Attendance		Kindergarten Attendance	
Strands	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Alphabet/Sight Words	1.7	1.34	2.5	1.78	4.1	1.52	5.5	.71
Phonemic Awareness	1.3	1.42	3.0	1.33	4.0	1.41	4.9	.32
Reading	0.9	.99	1.9	1.79	3.6	1.26	5.0	.67
Writing Mechanics	1.3	1.89	2.2	2.1	4.2	.79	4.9	.74

edge $t(9) = -2.585$, $p < .05$, and reading $t(9) = -3.096$, $p < .01$.

The results showed that the children who start first grade without attending kindergarten had lower mean developmental scores in all areas than children who did attend kindergarten before entry to first grade. On average they continue to remain behind the group that attended kindergarten even after receiving first grade instruction. An analysis of the fall entry scores on the ECLAS indicates that there was a statistically significant difference in phonemic skills. In the spring the ECLAS scores were statistically significantly different in alphabet knowledge and reading. Furthermore, the results indicate that children who do not have a kindergarten experience before first grade start lower, and the difference becomes larger and more significant in the spring.

Conclusion

Kindergarten is an important year for children for adapting to the rigors of school socially, emotionally, and academically. There are certain areas in which children should have competence when they leave kindergarten. For instance, children should have basic concepts about print (e.g., directionality, book handling), be able to name all of the letters, have phonemic awareness, and be able to retell stories (Armbruster, Leher & Osborn 2003). Today, first grade teachers have expectations that children will enter their classes with basic literacy skills like concepts about print. The kindergarten year also teaches children the rules of attending school, as well as social skills and other foundation knowledge to support learning in first grade. The result is that children who enter first grade without the advantage of kindergarten may be perceived as being deficient in literacy.

Researchers are trying to determine what factors can identify children who will be struggling readers so support can be provided as soon as possible (Bishop 2003; McCardle, Scarborough & Catts 2001; Scanlon & Vellutino 1996; Torgesen 1998). For the subjects of this study, not attending kindergarten is a factor that impacted future literacy performance.

Because kindergarten is such a critical year, it is not clear why New York, along with other states, does not mandate kindergarten attendance. However, recently New York City Councilwoman and mayoral hopeful Christine Quinn announced at her State of the City address that she wants to make kindergarten mandatory.

> Ms. Quinn's proposal would affect only the relatively small number of children who do not already attend kindergarten — estimates range from 3,000 to 6,000 each year — but she said that those children tended to be the ones who needed it most, including those from poor and minority families, foster homes, and students with disabilities (Hu 2012, A26).

The low number of subjects, because there are so few children who do not attend kindergarten in New York State, is a limitation to this study. However, this study does indicate that children who do not have a kindergarten experience tend to perform lower on literacy tasks compared to peers who did attend kindergarten. Furthermore, it should be noted that mandating kindergarten in the state should not cost the state significantly more since most children attend already. Indeed, the state might actually save money in the long term because these children may no longer need early intervention.

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Learning and Human Development In Waldorf Pedagogy and Curriculum

Doralice Lange de Souza

Waldorf educators believe that we are here to fully develop our potential, become better individuals, serve humanity as best we can, and use all our resources in a responsible manner.

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Waldorf education is an alternative educational approach that was created by Rudolf Steiner (1861-1925) in Stuttgart, Germany in 1919. Steiner was an eclectic intellectual who published more than 50 books and gave approximately 6000 lectures on various topics, including philosophy, science, art, and education. He also started a movement called Anthroposophy, which he defined as "the wisdom of the human being" and as a "path of knowledge to guide the Spiritual in the human being to the Spiritual in the universe" (Trostli 1998, 1). The Anthroposophical movement offers insights to different areas, such as holistic medicine, holistic education, architecture, and organic farming. Both the Anthroposophical and the Waldorf education movements can be found worldwide. According to the Association of Waldorf Schools of North America, today there are approximately 800 Waldorf schools in 44 countries.

The first Waldorf school was established in 1919, shortly after World War I when Germany was coping with many problems, including rampant unemployment and poverty. Emil Molt, the owner of a cigarette factory called "Waldorf Astoria," who was familiar with Steiner's earlier work, asked him to develop a new approach to education that might promote deep and positive changes in society and create a school for the children of his workers. Steiner accepted the challenge and started a school, which was called The Waldorf School to honor the name of Molt's factory. Steiner's educational proposal radically contrasted, and still contrasts, with mainstream education. It questions the mechanistic, materialistic, and consumerist mentality of modern society and promotes a non-materialistic worldview centered on the inner development of the individual and on the quality of his/her rela-

tionships with other people and with the natural environment. It also promotes a balance between the intellectual, physical, emotional, social, spiritual, and aesthetic aspects of human development.

The goal of this paper is to discuss the Waldorf view of human development and its implications for the Waldorf curriculum. In order to contextualize this discussion, I will speak briefly about child development and education at the preschool level. This will serve as an introduction to better understand child development and education at the elementary level. Later I will discuss some possible implications of the Waldorf approach for education in general. My research began with an extensive literature review on Waldorf Education and an in-depth case study of a Waldorf school. Even though my study was based on only one school, the majority of what I will discuss can be applied to other Waldorf schools, since schools that are members of official Waldorf Associations follow the same curriculum and pedagogy. The study involved six months of systematic observations in different classrooms and at events such as teachers and parents' meetings, school parties, cultural festivals, and workshops open to the community. It also involved interviews with teachers, parents, and children, and an analysis of students' work and of school materials such as handouts and the parents' handbook.

Development and Education From Birth to Age Seven

According to the Waldorf perspective, children develop in cycles of approximately seven years, and throughout each of these cycles, they have certain characteristics which need to be respected if we want to promote the full development of their different potentials. Waldorf educators believe that from birth to age 7 (the first stage of development), children's "life forces" (the energy that keeps us alive) are focused on their physical development. They also believe that during this stage, children's actions are moved by their will. They usually do things because they *want* to do them, not because they *have* to do them. Under normal conditions, they will not hesitate to get involved in whatever activities they choose, even if this means chaos from the perspective of an adult. For children it is perfectly normal to eat, dance, and play with a doll, all at the same time. The concept of "will" in the Waldorf context means different things. Sometimes it refers to just a "want," or a very strong "want." Sometimes it refers to the kind of mental power that moves us to do what needs to be done to accomplish something we want or need to do to achieve a goal.

In order to meet what Waldorf educators believe are children's developmental needs, the curriculum is designed to optimize children's physical development and the strengthening of their will. The school day includes a lot of games that involve physical movement, such as rope jumping, rhythmic clapping, and nature walks. It also includes manual and artistic work like making toys, painting, modeling with clay, singing with rhythmical movements, role-playing, reciting poetry, preparing snacks, and organizing and cleaning the classroom. Waldorf educators believe that, among other things, the cooking, cleaning, and organization of the classroom help discipline children's will, since these tasks need to be done on a regular basis whether children want to do them or not. Manual and artistic work can help them develop an admiration for cleanliness, organization, and beauty while it fosters respect and appreciation for different kinds of materials and activities.

The Waldorf curriculum emphasizes the role of rhythm in children's lives in order to discipline their will and actions. Waldorf teachers believe that without the direction of an adult and a well-established rhythmic pattern throughout the day, children will engage in a number of activities in chaotic and superficial ways, missing the opportunity to learn how to make good use of their will. Waldorf educators are of the opinion that educating the will is extremely important so that children will learn to control their negative impulses and will have the mental power that it takes to do the things they want to do and/or need to do in order to achieve their goals throughout their lives.

An important characteristic of the Waldorf curriculum during these first years is that there is a special time in the day set aside for storytelling. It is interesting to note, however, that Waldorf teachers usually do not read stories to their students. They memorize the stories beforehand, so that as they tell them to the

children, they can give the stories a personal touch through the use of their voice and body expression.

Waldorf educators believe that, from birth to the age of seven, children learn basically through play, imitation, and example. They understand that children perceive and imitate not only people's words and actions, but also their inner attitudes. Trostli (1988, 93-94) explains:

> Imitation can take several forms. A young child might imitate someone's actions directly. If a teacher is carding and spinning wool, for example, a child might also want to card and spin. Children might also imitate in their play the actions that they have encountered. For instance, a group of children might join together to form a moving company. They will pack up the toys in the kindergarten into a moving van that they have made of some chairs and boards and drive it to another land. Children also imitate our inner attitude. Kindergarten teachers therefore try to pervade everything they do with care. This will be reflected in the way they place an object on the seasonal table, or the way they put the toys away at clean-up time and make sure all the babies are tucked in and don't have any cold toes sticking out. If parents and teachers approach common life tasks, such as cooking or cleaning with reverence and care, children will develop a deep respect for work and for material things. If, however, such tasks are done quickly and sloppily, this will be reflected in children's difficulties in finding meaning in life.

With this in mind, Waldorf teachers try to constantly work toward furthering their own personal development. They attempt to bring their best to each activity and task, so that they can serve as positive role models for their students.

Development and Education From Seven to Fourteen-Years-Old

From the age of 7 to 14, according to the Waldorf perspective, children's "life-forces" are centered on their "feeling life." During this stage, Waldorf teachers try to optimize the development of children's feelings and imagination. They believe that the emotional life of children should be well nurtured before fostering their intellectual development. A teacher comments:

> First you build a healthy body and a rich soul life through hands-on experiences, drawing, painting, and music…. Then you have the foundation to develop the intellect…. Students come to me from public schools and they are filled with facts. At the most fundamental level, I discover they have a weak relationship to the world, because it does not come through their experience and their feeling life. Their imagination has not been given the time or the space to develop. It is just a careful tending…. If you plant a seed in rich soil, and you grow a really strong plant, that is the human being who can survive in the real world. If you take a seed and you put it in poor soil, and little sun and little rain, and tons of fertilizers, and expose it to real life circumstances, it is not going to survive….

Waldorf teachers believe that the development of imagination is extremely important since it nurtures our "feeling life" and helps us establish solid relationships with the world. They also believe that imagination is the basis of our creativity and true freedom: We need to be imaginative in order to be able to create new ways of thinking and to foresee different possibilities for solving problems and accomplishing tasks and goals. We also need to be imaginative in order to access ways of thinking that transcend the reality that our five senses can perceive. One of the strategies Waldorf teachers use to promote children's imagination is to introduce the subject matter through stories (Textbooks are not used in Waldorf education). A teacher explains:

> We try to give children pictures that have a certain life and children can live into and can come to them with a certain amount of enthusiasm, whereas if you just give the concept, it is dead. So when you are teaching the letters for instance, you could say this is an "A" and this is a "B," and "B" says "B." But if you develop it out of the pictures..., you start with the story about the bear, and then you draw the bear, and then you can see the form of the "B" and the bear, and you can sound the word and hear the first sound. The child has gone through a very enliv-

> ening process much more interesting than saying this is a letter "B."

According to Waldorf educators, as children listen to stories, they create images that will naturally "live" in their hearts for a long time. These images, they explain, will not only help them to understand moral concepts and principles, but will also help them connect with the knowledge and levels of reality that can only be accessed through imagination and creative thought.

In elementary school, the focus is not so much on how much knowledge children have access to as on the details that can potentially stimulate their imagination and engage them emotionally with the subject matter. After teachers tell a story, they usually have children engage in activities such as painting, drawing, modeling with clay, role playing, poetry, music and/or corporeal games in which the students can concretely experience the story. This potentially promotes their imagination, creativity, and their gross and fine motor skills. Only after all this do they direct children towards more intellectual experiences in which the content is the primary focus.

In Waldorf education, teachers try to delay the intellectualization of children's experiences at school as much as possible. They believe that a precocious focus on intellectual development impairs the healthy and balanced development of children's emotional, physical, social, aesthetic, and spiritual natures. Therefore, they do not start teaching writing until first grade and reading until second. They also try to delay as long as possible scientific explanations about the world around them. For example, if a child from first or third grade asks why it rains, the teacher will normally either try to call the child's attention to a different subject, or will ask the child what she herself imagines the answer to the question is. The teacher might also tell the child a story that talks about the water cycle in a figurative way. As one Waldorf teacher put it:

> You might … tell a story about a little drop of water that fell down as rain into the stream at the top of the mountain, and how this drop of water joined other drops of water by tumbling and splashing and spilling down the mountain, and how it rushed ever faster and faster, and then it slowed down as it came into the river and saw many things along the banks, and it eventually came into the ocean and then it was so hot that eventually the sun fairies came and pulled it up. Then you have a picture of the water cycle, a very imaginative picture.

When Waldorf teachers happen to have a student who comes to school already knowing how to write and read before first or second grade, they attempt to redirect the child's attention so as to avoid reinforcing the development of these skills before what they believe to be the "right time." When the time comes to work on writing or reading skills with the whole group, they reintroduce the child to these skills through the Waldorf method. While some children do not mind going over what they already know, considering that the Waldorf approach includes a lot of imaginative, artistic, and physical work, some children may feel held back and frustrated. As I collected data in the second grade classroom, I observed that while the teacher was still asking the class to read individual words from the board (initial stage of reading), a few students would pull thick books from under their desks to read when the teacher wasn't looking and/or when they had some free time.

I personally agree with the Waldorf approach in the sense that we should not be rushing children into reading, writing, computing, and thinking scientifically while they are still young. There is so much else for them to be doing at a young age that perhaps they will not have the opportunity to do later. Besides, there are definitely things that, if not learned at a younger age, are hard to learn later in life (e.g., learning to play and developing the imagination and gross coordination skills). However, holding those students back who spontaneously develop these skills on their own may be problematic. At the time Steiner lived, children did not have as much contact with the written word as they have today. Now, however, children are exposed from birth to the printed word. As a consequence, they spontaneously develop an interest for reading, writing, and computing earlier in life, and many of them are in fact learning these skills on their own. When we try to redirect their attention to different activities, many are likely to feel frustrated if they are not allowed to pursue their own interests further. There are also chil-

dren who really need to learn how to read, write, and compute while they are still very young so that they will be able to survive and fend for themselves in the streets. This is unfortunately the reality of millions of children in Brazil, where I live, that they may need to buy/trade/sell their own food and clothing, take buses, and move around in the city on their own.

Many of the stories Waldorf teachers tell their students in the earlier grades refer to fairies, gnomes, angels, and saints. According to the Waldorf perspective, there is a deeper reality that goes beyond everything our senses can normally perceive. These stories, they believe, can potentially help students keep themselves open to this kind of reality. They also use a lot of biographies and dramatic plays in their teaching. They are of the opinion that biographies and role-playing foster students' imaginative and feeling life and lead them to look at information in context, which helps them to better understand the subjects they are working on. In addition, they nurture in children a degree of empathy for the people they are studying. A seventh grade teacher once told me that as she worked on a unit on Galileo and reviewed his biography, she and her students developed a little role-play of his trial. She observed that, as the children put themselves in the shoes of the different protagonists during the play, they started to better understand the different viewpoints involved, which led them to a more complex understanding of what was really at stake in Galileo's trial.

In Waldorf education, there is a special focus on children's intellect only during their third stage of development (14 to 21 years old). It is only then, according to Steiner and his followers, that children's life forces will be centered on their intellect. Since the goal of this paper is to deepen the understanding of children's development and education at the elementary level, I will not discuss the third stage of development and education here.

Some General Characteristics of the Elementary Curriculum

Waldorf education focuses on promoting a balanced development of the different aspects of the child (intellectual, emotional, physical, social, spiritual, and aesthetic). In addition to offering the regular academic disciplines we find in most educational institutions, Waldorf schools offer a rich variety of experiences for children. In the school where I did my research, which has a typical Waldorf curriculum, students have handwork, physical education, eurhythmy, and two foreign language classes (German and Spanish), and they learn how to play the recorder — all starting in first grade. In third grade, singing classes are added to the curriculum. In fourth grade, students begin to study a string instrument. In fifth grade they can either continue to study a string instrument or they can choose to begin learning a wind instrument. During this academic year, they also begin taking chorus and woodworking classes. In sixth grade students join the school orchestra. Children experience each of these classes in increasing levels of difficulty as they move from grade to grade.

In the Waldorf context, eurhythmy, physical education, handwork, and woodworking classes have some peculiarities. For example, Eurhythmy is a practice created by Steiner, and to the eyes of someone who doesn't know it, looks very much like a slow motion dance. Waldorf educators define it as music and speech expressed in bodily movement. It is also called "visible speech" or "visible song" or "an art form which translates music and speech into movement " (Holland 1981, 13). Some of the benefits of Eurhythmy, Waldorf educators claim, is that it helps us connect body and soul and is a powerful means of artistic expression. I have observed Eurhythmy classes, which appear to promote coordination, rhythm, spatial and social awareness, and graciousness of movement.

Physical education classes in Waldorf schools emphasize good sportsmanship and teamwork, and not competition. From first to third grade the focus is on games. After fourth grade the different sports are gradually introduced. It is important to remark, however, that in Waldorf schools, physical education occurs throughout the day as the regular classroom teacher integrates the teaching of academic subjects with physical movements. This can be seen, for example, in the kind of games the teachers regularly play in the early grades to help children memorize the times table. For instance, the teacher will call out "5?" and the children will answer "5x1." The teacher will then say "10?" and the children will answer "5x2." Next

the teacher will call "15?" and the children answer "5x3," and so on. This sequence of questioning and answering is accompanied by a complex sequence of energetic clapping and feet stamping. I myself played this game in class along with the children. It was not only fun and helpful in terms of helping everyone memorize the times table, but it was also an excellent way to relieve some physical energy.

The handwork classes, which are usually taught both by a specialist teacher and by volunteer parents, teach students to knit, crochet, embroider, and hand- and machine-sew. The woodwork classes focus on teaching children how to make little wooden objects, such as spoons, bowls, and birdhouses. The Waldorf teachers whom I interviewed explained that these classes are important not only because they teach children skills for working with their hands, but also because they contribute to the development of their will, the kind of inner power we all need in order to control our thoughts and actions. The handwork teacher at the school I studied made an interesting comment that can help us understand this:

> If you are knitting a sweater … it is a huge project. You might be excited for the first part of the sweater and then in the second half, the only thing that keeps you going is that you know that you need to finish it because you want to wear it. It's basically your will telling you. In the first grade they see this recorder bag and they are so excited to knit it. But after the third row, they realize that it is boring and they need to keep going … and to keep adding to it. You cannot skip corners … and so that's how they are training their will.

An important characteristic of Waldorf education is that it tries to promote the artistic and aesthetic development of children. Everything teachers and students do involves some form of artistic expression and beauty. The Waldorf environment is usually aesthetically pleasing. The classrooms are generally filled with natural light and decorated with plants and flowers. Most materials are made of organic elements (one rarely finds anything made of plastic in the school). The classrooms are habitually kept clean and organized. Children's artwork is carefully displayed on the walls to embellish the environment. There is no overcrowding of materials and objects anywhere to be seen. Every object seems to have its own designated place. Children engage in some kind of artistic work every day. They will regularly draw, paint, recite poems, sing, play musical instruments, do some kind of craft, and/or participate in some kind of role play. One interesting characteristic of the Waldorf curriculum is that artistic activities are treated with the same seriousness as academic work. The richness of the artistic life in a Waldorf school is amazing. It is practically impossible to visit a Waldorf school and not hear groups of students singing, playing some kind of instrument, reciting poetry, or coming and going from play rehearsals. At the school I studied, each class put together one play a year. Students wore beautifully handcrafted costumes, skillfully danced and sang, played their own music, and used sophisticted stage and lightening techniques. The quality of their productions was remarkable when considering the children's ages and comparing them with the work of children in other schools I have observed.

Steiner and his followers emphasize the role of the arts and of artistic work in the curriculum as a way to (1) express and refine one's feelings; (2) establish a personal connection with the students' learning; (3) integrate different kinds of learning (cognitive, emotional, spiritual, and physical); (4) socialize with others (this is particularly true in the case of singing in choirs or participating in plays); (5) nurture and engage the imagination; (6) promote creativity; (7) develop a taste for beauty; (8) give a degree of depth to experiences; and (8) help us remember what we are learning. Trostli (1998, xxviii) explains the last two points well:

> In Waldorf schools the arts are not taught for their own sake, but because they allow a child to experience a subject on a far deeper, richer level than the intellectual one…. Artistic experiences usually leave lasting impressions in a student's life. Information can be gathered or retrieved, but the experience of the subjects through individual work and through the arts builds a foundation in the soul that will enrich all further learning and the whole of a student's life.

The different disciplines in the Waldorf curriculum are integrated. For example, one of the subjects of the

fifth grade is the Ancient Greece. While children study Greek history they usually do some kind of artistic work connected to the topic (e.g., draw and paint pictures related to them and play and/or sing Greek music). In Eurhythmy classes they are likely to do some kind of work related to Greek poetry, and in physical education classes they practice running, long jump, wrestling, javelin, and discus, which were typical sports in ancient Greece. They also organize and participate in their own version of the "Olympic Games," an event that originated in ancient Greece. They not only learn about and practice typical Olympic sports, but also get to know the goals and values that governed the Olympic games in ancient Greece. These activities nurture the different aspects of children's development and promote a perception that what they are learning is all connected.

Another important aspect of the Waldorf curriculum is its focus on the spiritual dimension of human development. While Waldorf schools are not religious, they are based on Anthroposophical and Christian principles and on the belief in life before and after death. The whole Waldorf perspective is based on on the assumption that we are spiritual beings in search of development. Education should therefore should help us become more human than we already are. One of the ways in which Waldorf educators promote the spiritual dimension of development is by nurturing mindfulness and the habit of doing the best we can in everything we do. They teach children to do everything with careful attention to every little detail of their work. They also nurture the "spiritual self" of the children by fostering in them a sense of reverence for everything that generates and gives meaning to life. They start and end each school day with a poem thanking the energy that brings us to life; recite verses or sing songs before each meal thanking "mother nature" for the food that nourishes us; and teach children to treat everything and everyone around us well, as if each person, animal, or object were sacred and had a value that goes far beyond its instrumental use for us. Yet another way in which they nurture the spiritual dimension is by promoting a sense of connectedness, appreciation, interdependence, and respect for nature, including an appreciation for the richness and beauty of natural elements like the sun, the rain, the ocean and the plants. Waldorf educators do a lot of outside work with children, tell stories about nature, recite poetry that addresses nature's beauty, and show children through stories, poetry, and music how we depend on nature for our wellbeing and survival.

Rhythm is a very important feature in the Waldorf curriculum. Steiner and his followers strongly believe that the way the school day is organized significantly affects learning and development. They carefully plan the schedule in ways that alternate what they see as "breathing in" and "breathing out" activities. In other words, they alternate activities that use the mind more than the body with activities that are more physical than intellectual. Because they believe that children are usually more alert, receptive, and capable of concentrating in the morning, they use the first two hours of the day for what they call the "main lesson." The main lesson generally starts with a "morning circle" that includes recitation, stretching the different parts of the body, singing, dancing, and some energetic physical exercises. The younger the children, the longer this part of the main lesson is "breathing out" which helps students to complete their transition from home to school. After this, children have an "in-breath" type of activity, in which they work on a specific subject. Following that, they have snack for an "out-breath." The remainder of the day is planned in ways to honor this balance between "contraction" and "expansion," "breathing in" and "breathing out" types of activities.

An important feature that relates to rhythm in Waldorf education is block teaching. A same subject is taught in the course of several weeks during main lesson (usually from three to six weeks). In the case of the disciplines that require constant practice such as English and math, while they are taught in blocks during main lesson, they are also regularly worked on at other times during the day. Waldorf educators believe block teaching is beneficial since it allows students to explore a same subject in depth and without interruptions for an extended period of time.

An additional characteristic that relates to rhythm in the Waldorf curriculum is connected to the fact that Waldorf teachers believe that students should "go home" and "go to sleep" with some of the experiences they have at school before asking them to in-

tellectually analyze them. From their perspective, while children play, rest and sleep, the things they are exposed to are processed and transformed within their being and become part of them. Waldorf educators believe that an organic/emotional experience with the new subject should come first, and only later should the subject be intellectualized. According to them, a precocious intellectual experience with a new subject might prevent children from connecting with it in a more organic/emotional level.

A final important characteristic of the Waldorf curriculum is that the same teacher stays with the same group of students from first to eighth grade whenever possible. Waldorf educators are convinced that children's learning is largely influenced by the feelings they have for their teacher. They need an intimate, stable, and continuous relationship with a mentor, which cannot be achieved when there is a change of teacher from year to year. The "eight years in a row" approach seems to have both strengths and weaknesses. It is a major problem when the teacher and a student do not get along and are unable to work out their differences. When this happens, they have to either forcibly put up with each other or the student has to leave the school, since Waldorf schools usually have only one class for each grade. A Waldorf graduate comments on other negative aspects of the "eight years in a row" approach:

> If I had a wonderful teacher, a mentor, someone who could help me grow spiritually, emotionally, and intellectually, I would love to have one teacher. But if the teacher and the student do not connect, if the teacher is not a quality teacher, that can be more harmful during the developmental stages than having a new teacher every year. I remember being at the Waldorf school wishing I could have a new teacher next year, wishing that I could have "that" teacher or "that one." In addition, with many teachers you learn more about diversity, different people, different styles. You experience male and female energy. You experience the different strengths and weaknesses of different teaching styles.

An additional problem of the "eight years in a row" approach is that it may be hard — if not impossible — for teachers to master all the knowledge and skills they are supposed to teach from first to eighth grade. Some Waldorf schools are in fact starting to address this problem by having specialist teachers work with children in specific academic disciplines. When this happens, the class teacher is still responsible for introducing the subjects during the main lesson using the Waldorf method, which includes a lot of storytelling and physical and artistic work. The specialist teacher comes in after the main lesson to work with specific knowledge and skills that supposedly are more difficult for the class teacher to master and teach.

Some strengths of the "eight years in a row" approach are that because the teacher stays with the same group of students for a long period of time, he/she can provide consistency and continuity in their school experiences. In addition, because teachers, students, and parents spend a lot of time together, they have numerous opportunities to get to know each other well and develop a solid relationship and a sense of community. Edmonds (1992, 54-55) eloquently addresses some advantages of this approach:

> How long does it take an experienced teacher to know thirty children or more — really to know them, understand them and be able to enter into their intimate needs? And the contrary, how long does it take children to grow so accustomed to the quality of mind, the temperament, the mannerisms of a teacher that they feel happily anchored, understood, and secure? And what can it mean in a child's life to have to make a new adjustment to a personality every year again? What can be the effect on a young child of being thus uprooted and transplanted year by year during the most formative years of its life — a different quality of discipline as well as all else? …And what does it mean to a teacher to be forever dealing with the same age group, the six year olds, the nine year olds, and so on, knowing hardly at all what went before and without responsibility for what comes after? Where is the sanity in this which is accepted as the universal practice? We have seen that a child's life is not only a succession of years — it is a life-developing process, and like all such processes there are nodal points and intervals

> and crises, that is, times of vital transition which have to be specially known, prepared for, met and carried over. All this is part of a teacher's profoundest service, and how can it be achieved without the kind of continuity with the children in their growing, and with their parents? How, in these turbulent times, can we hope to find people with inner strength of security, feeling strongly anchored in themselves and in their tasks in life, if they have not experienced that anchorage and security in their growing years?

As we think about the strengths and weaknesses of the "eight years in a row" approach, perhaps a better alternative would be to have the same teacher for two or three years with the same group of students. This way we would still be able to benefit from the positive aspects of the approach while minimizing some of its problems.

Evolution and Freedom

According to Steiner and his followers, the main goal of education is "to develop free human beings who are able of themselves to impart purpose and direction to their lives." (Steiner cited in Holland 1981, 1). Note, however, that the concept of freedom for Steiner is different from that which most of us hold in the Western world. For him and for his followers, freedom is not necessarily connected to the idea of "choice," "absence of constraints," or "democratic participation." It is essentially related to self-knowledge, authenticity, and self-control. These qualities, according to them, are necessary if we are to be true to ourselves, if we are to live our lives according to our beliefs, if we are to have the will power we need in order to meet our innermost needs and goals, and if we are not to be deceived and mislead by the materialistic values and artificial needs imposed on us by the mainstream culture. Freedom, from the Waldorf perspective, is also related to our ability to intervene between stimulus and response so that we will not simply keep responding automatically to situations in which we find ourselves.

True freedom, Waldorf educators claim, can only be achieved in the long run through structure and direction. From their viewpoint, children should first learn to "perceive reality as it really is," "feel it with their whole being," and develop a degree of knowledge before they are given some autonomy to start making decisions about their experiences. Otherwise, they will not be able to make intelligent decisions and will keep acting based on impulses and "unripened judgement" (Steiner 1998, 42). Considering all of this, Waldorf elementary school educators see their role as directing children step-by-step in their school experiences, giving them the opportunity to make certain decisions only as they grow older and more mature. It is only during high school that Waldorf students begin to have some voice in the decision making process in their school.

Waldorf elementary school teachers believe that they should direct most of the activities children do in school to make sure they will be exposed to certain learning experiences they might not naturally expose themselves to for fear of failing and lack of opportunities, interests, and initiative. Teachers want their students to explore all their potentials, including their weaknesses. They want to be sure that children will always go beyond where they already are, so that in the future, doors will not be closed to them and they may be truly free.

In the case of preschool education, the teachers are not as directive as in elementary education. Since they believe children at this age learn mostly by imitation, they model the kind of behavior they expect from their students. For example, if they want children to do some sewing instead of telling them to do so, they will start sewing themselves. As children observe their teacher, they tend to spontaneously follow his/her lead.

An important characteristic of the Waldorf structure is that it does everything it can to protect childhood. Waldorf schools ask families to not permit their children to watch TV or use the Internet until a certain age (usually high school). They want to prevent children from being overly exposed to mass culture and to the materialistic/consumerist mentality that permeates the media. Waldorf teachers also do not allow certain subjects to be discussed in class. They believe that much of what children say they want to talk about in school is imposed on them by the media and adults in their lives. They will usually only open space for the discussion of subjects children bring in to school if they feel that the children are genuinely interested in these subjects, are ready

to discuss them, and can potentially learn valuable lessons from the discussions that these subjects are likely to bring up.

Waldorf teachers do everything they can to prevent students from dealing with issues that, from their perspective, children are not yet capable of handling. They try to make sure that, at least in school, children can be children and will not have to worry about the difficult reality that perhaps some of them need to directly or indirectly face outside school (e.g., poverty, hunger, prejudice, violence, abandonment). They want the children, as they grow older and face important difficulties in their lives, to have good memories of their childhoods and know that life is good and worthy of being lived and that life can be much better than it seems during difficult moments.

The degree of structure of the Waldorf curriculum obviously does not work for all children. While it is positive for the children who need a high degree of direction to work and learn, it can cause frustration for those who tend to be more self-directed and independent. The latter tend to feel suffocated when they cannot work according to their own rhythm and personal interests. I talked to some Waldorf students and alumni who did wonderfully well with the kind of structure and direction offered by Waldorf Schools; however, I also met people who left Waldorf education because they felt "asphyxiated" with the degree of directiveness they encountered in school.

A common criticism against Waldorf education is that it tends to isolate children from the world. From my perspective, it is true that Waldorf students lack some information about current issues beyond school. However, Waldorf children also seem to be connected to the world on a far deeper level than most other children I have observed. Because the Waldorf curriculum places so much importance on the development of children's imagination and "feeling life," they seem to be more able to empathize with the problems of other people and living beings around them. Unlike many children who are immersed — and I would say, almost drowning in information about what is going on in the world — Waldorf children seem to grow increasingly sensitive to the problems of the world around them. Unlike most teenagers I know, Waldorf students seem to be open to approaching people around them to ask if they need help. The first time I visited the Waldorf High School building of the school (the preschool and elementary school building was on a different side of the school yard), a group of high school students approached me, said good morning and asked if I needed help. I told them that I was a researcher and that I wanted to meet Waldorf teachers and students. They immediately invited me to their classroom and introduced me to their teacher. After the class, these students and some of their friends spent snack time talking to me about their experiences in school. Those of us who know teenagers know that they usually are not that open to adults and tend to prefer to be around their peers.

There is an important issue related to the degree of directness of the Waldorf curriculum that from my viewpoint is quite problematic. It relates to the fact that most of the knowledge that students have access to in the school is directly taught to them by their teachers. In other words, in the Waldorf context, children rely in great part on the knowledge, experience, and worldview of their teachers. Waldorf elementary students do not do a lot of research on their own to build their own knowledge. This is a problem, I believe, for two main reasons: First, the children's access to knowledge and experiences is limited, since they are not exposed to different sources of information, viewpoints, and perspectives. Their teachers, like all of us, obviously have biases and limitations. Second, since we live in an age in which information is quickly becoming obsolete, those who do not learn how to seek knowledge on their own run the risk of becoming either dependent on others and/or of becoming outdated.

Conclusion

Waldorf schools have a unique and well-established ontological foundation and understanding of human development. They base all their actions on this foundation, regardless of all the resistance they face in order to do so. As we know, there is a huge expectation today that schools accelerate children's learning. We live in the era of the "hurried child" (Elkind 1981). Today most schools are teaching children how to read, write, and compute as early as in preschool. Because Waldorf schools refuse to do what the great majority of schools are doing, teachers and

families who choose this kind of education are often considered old-fashioned, radicals, and/or out of touch with reality. Yet Waldorf educators and families who know Steiner's philosophy and are conscious of why they chose Waldorf education, feel at peace with their choice. They believe that once the child has a healthy body, a well-educated will, and a well-nurtured emotional and imaginative life, he/she will find no difficulty in growing cognitively and intellectually. They are of the opinion that even though their children may in the early school years seem temporarily behind in terms of academic development when compared to peers in other kinds of schools, in the long run, they will catch up with children of the same age, with the advantage that they will be likely to have a more balanced and harmonious development of all aspects of their being (intellectual, physical, emotional, social, aesthetic, and spiritual). People involved with Waldorf education tend to believe that our goal in life goes beyond the development of the intellect, finding a place in the job market, achieving status, and accumulating material possessions. They are of the opinion that we are here to fully develop our potential, become better as individuals, serve humanity in the best way we can, and use all the resources we have in a responsible manner.

To find out whether this really happens, I found only one thorough and independent study on the outcomes of Waldorf education. This study was conducted and financed by the Education Department of Bonn, Germany. This study included 460 graduates of Waldorf schools born between 1946 and 1947. It was published in 1981 by *Der Spiegel*, a magazine equivalent to *Newsweek* or *Time*. According to this study (Beste Einsichten 1981), Waldorf graduates did three times better in the Abitur tests than students from the State schools. (The equivalent test in the United States would entitle students to skip introductory courses and start college as sophomores.) According to this study, 20% of Waldorf graduates chose to work in educational and social fields, 12% in the medical area, and 12% in the artistic/linguistic field. Very few chose technical and legal professions. The study also claims that the professional choices of the graduates were based on their inclinations, interests, abilities, and social and altruistic goals. They tended not to show an interest in success, prestige, recognition or financial concerns when choosing their professions. Because this is the only research on the subject, more research is necessary to verify the results and to investigate other possible outcomes of Waldorf education.

One important additional aspect of Waldorf education relates to the fact that the Waldorf curriculum is very much the same in every Waldorf school everywhere in the world, and it follows the same directions given by Steiner when he created the first Waldorf School in Germany in 1919. Since Steiner's curriculum was created in a specific time, place and culture, it neglects the economic, cultural, social, and the political realities of specific groups of people in other localities and stages of development. Waldorf educators tend to respond to this criticism by claiming that there is an universal reality that transcends matters of time, place, and culture. They also claim that the Waldorf curriculum was so well developed by Steiner that it is still valid even though we live in a different context and reality. This argument is evidently weak. The curriculum, as it was created by Steiner, privileges a certain body of knowledge (it is visibly Eurocentric) and neglects important cultural, economical, and political issues. While many Waldorf educators claim that they can adapt the curriculum according to their students' needs and to their local reality, most of the Waldorf schools described in the literature and all the schools which I had access to both in Brazil and in the United States implement the official curriculum in quite similar ways.

While the Waldorf approach has some limitations, it does offer us some important insights. For example, the Waldorf experience protects children's right to be children and not have to worry about certain problems and responsibilities while they are still young. Waldorf educators do not want children to be concerned with making decisions about educational experiences that may affect their future. They also do not want their students to worry about issues such as war, violence, and hunger, at least during the few hours a day while they are at school. They will have plenty of time to engage with these kinds of problems outside school. However, we need to consider that today, more and more children are being called on to deal with the arduous reality of the world around them either because they live this reality or because

they have access to it through the media. This is in fact forcing them to grow up more quickly and become older earlier than they should. As a consequence, it is difficult to find children, teenagers, and young adults who are truly imaginative, who know how to play and how to use their free time in healthy ways, who know how to express themselves through their body and through the different artistic means, and who know how to appreciate the beauty of simple things such as the colors of a flower or sunset.

Another interesting insight brought up by the Waldorf experience relates to the criticism it makes about the precocious intellectualization of children, so fashionable today. As Waldorf educators emphasize, it is during our first years of life that we establish — or don't establish — the basis for our solid and healthy physical, emotional, and social development. If the child spends most of her time reading, writing, and studying, how will she possibly establish this basis?

A distinct issue raised by the Waldorf framework, which we tend to neglect, but is extremely important, is the notion that we should educate children's will during their first years of life. This kind of education can start with little things such as regularly putting the toys away before playing with something else and finishing the projects one starts before moving on to a different one. If the child doesn't learn to discipline her will to do what she wants or needs to do with care and dedication, as she grows older, she is likely to become undisciplined and slovenly. Disciplining the will is also important so that the child will develop the strength she needs to do the things she wants to do and has to do in order to meet her goals later in life.

One more important concept brought up by the Waldorf experience pertains to the importance of nurturing the feeling and imaginative life of children. Children need to emotionally connect with the things they are learning so that they can feel motivated to learn and to make sense of what they are learning. The development of the imaginative life of children is also extremely important, since our imagination intensifies our feeling life and it is through it that we can visualize new and better possibilities for our lives and for solving our problems. It is also through our imagination that we can give some qualitative leaps in our understanding of the world, which can open us up for breakthroughs in knowledge. The importance of the imaginative life of children is a well-developed theme in Sloan's (1983) work.

An additional contribution of Waldorf education relates to how it connects and changes intellectual and physical activities throughout the school day. This not only helps children develop physical skills and learn academic subjects through corporeal movement, but it also allows students to free up some of their physical energy during and in between classes, which potentially improves their sense of wellbeing in the classroom.

The role of the arts in the education of children is another fundamental aspect of the Waldorf experience. Different artistic means can be important teaching and learning tools and boosters for the development of students' creativity. Besides, to develop the ability to express ourselves through different artistic means and to recreate and/or to appreciate the beauty of the world around us can make our lives much more attractive and pleasant.

A further contribution of the Waldorf experience relates to the importance of nurturing in children a sense of interconnectedness, interdependence, and respect for other people and for the natural world. We need to be attuned to the reality that we are interdependent with everyone and everything around us. Our actions have consequences not only in the world around us, but also in ourselves, since we depend on others and on the environment for our own survival. This kind of learning is essential if we are to start acting in more responsible, human, and ecological ways.

Waldorf educators are concerned about the influence of television, the Internet, and other electronic mediums in children's learning and development. While asking parents to prevent children from watching TV or playing on the Internet may seem radical, we do need to consider the extent to which the media have been affecting our values, habits, lifestyles, and the way that we relate with the world and people around us.

The Waldorf experience reinforces our understanding that young children learn, in great part, through imitation. Words by themselves are not enough. It does no good for teachers to tell children to keep their shelves organized or to not yell at others, if the teachers themselves are unorganized and yell at their students. If we are to really educate chil-

dren, we need to start by educating ourselves. It is what we do, and not necessarily what we tell children to do, that will effectively influence them.

Finally, while for most of us freedom is associated with choice, absence of constraints, and democratic participation, for Steiner and his followers, true freedom necessarily requires the development of inner qualities of our being, such as self-knowledge, self-control, and will power. It demands self-knowledge so that we will know what our true aspirations and needs are, so that we will not be deceived by the artificially created expectations and needs imposed on us by others. It demands self-control and will power so that we can do what needs to be done to meet our goals and live our lives according to our values, and not be swept away by the demands of the hegemonic forces of mainstream culture. While Waldorf education at the elementary level is highly sheltered and structured to to the degree that it may not seem appropriate for some, there may be value in structuring and directing a little more our children's experiences. Otherwise, we might not be able to really promote the balanced development of the different aspects of their being (intellectual, physical, emotional, social, spiritual and aesthetic) and help them develop the tools they need in order to become truly free as they grow older.

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Jungian Typology as a Holistic Teaching Strategy in Higher Education

Diane Montgomery, Kamden Strunk,
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A four-quadrant educational model that includes psychomotor, cognitive, social/emotional, and creativity elements results in deeper, more engaged learning.

There is a long history of using the work of Carl Jung in the interactive processes of teaching and learning. For example, archetypal psychology influenced the ethical suggestions to teachers provided by Mayes (2005), and depth psychology has been promoted as essential consciousness work for teachers (Romanyshyn 2012), particularly with students in gifted education (Reynolds & Piirto 2005; 2007). Learning style has been theorized as a natural extension of personality typology (Bargar, Bargar, & Cano 1994), with abundant suggestions for planning and coordinating strategies to meet different learning preferences for all ages (Lawrence 1995) and with specific suggestions for young children (Murphy 1992).

Typically, when applying Jungian psychology to education, educational researchers have documented differences in the preferences of learners on the basis of psychological type. For example, Willing, Guest, & Morford (2001) found that students studying to become teachers were more likely to be extroverted, intuiting, and feeling types as compared with the general population. Among a group of students who were classified as at-risk for dropping out of high school, thinking and perceiving types were significantly overrepresented, while feeling and judging types were underrepresented (Hart 1991). Among a sample of human resource students, Gallagher (1998) found that thinking types, intuiting

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types, and judging types were more predominant. In an analysis of adult versus traditional-age college students, Lynch & Sellers (1996) found that adult learners were more likely to be judging types and traditional-age learners were more likely to be thinking and perceiving types. Many such studies can be found to better understand the needs of diverse learners across many disciplines.

Other research using typology demonstrates preferences in learning tasks. For example, among a sample of fifth-grade students, Ferdman & DiTiberio (1996) found that type is related to writing preferences and abilities. They found that intuiting writers were better able to organize details into a composition or draw critical inferences than were sensing writers. In a study of communication preferences in asynchronous learning, Lin, Granton, & Bridglall (2005) found that thinking types tended toward reflection and organization, while feeling types tended toward comfort and freedom from fear of confrontation as reasons for preferring asynchronous learning. Clark & Riley (2001) used typology to explain success in a beginning college chemistry class. Among a sample of Polish college students, Tobacyk & Cieslicka (2000) found that psychological type was related to the choice of college major, with language students more likely to be intuiting, feeling, and perceiving types, while management students are more likely to be sensing, thinking, and judging types. These studies point to differences in learning, communication, and task preferences based on psychological type. Yet, to take the awareness of type difference further, our team considered how knowing the typology of the learners might change the instruction and pedagogy of our teaching. Although we noticed patterns of dominant types in our classes, all types were represented. We further wondered if working only with the typological *strengths* of students might limit their holistic development. This, coupled with our increasing desire to meet the full developmental needs of *all* our students, led to innovation in the design of our teaching strategies and methods.

Teaching and learning excellence in colleges and universities is focused on designing motivating lectures, activities, and assessment procedures to engage learners (Stes, Coertjens, & Van Petegem 2010; Stes, Min-Leliveld, Gijbels, & Van Petegem 2010). When we decided that typology preferences would be honored in our college classrooms, the integration of the four functions posited in Jungian typology became our teaching goal. Rather than emphasizing one typological quadrant, we applied an integrative model in our teaching. Our reflective work led us to conclude that this disintegrative approach to the use of typology had a significant limiting effect on students, helping them to develop in one area to the detriment of other important human and humanizing areas of development. Therefore, the purpose of this discussion is to argue for a more integrated, holistic view of typology for post-secondary learners. Although psychological type is highly relevant to learning preferences and expressed strengths in educational approaches and tasks, the view espoused here is that the psychological functions should be used to develop a holistic pedagogy that allows all preferences and strengths to flourish, while at the same time encouraging growth and exploration of those areas in which students do not express preference or show strength. By bringing imagination and emotion to formal study, adult learners can continue to excel in any domain of study within this integrated and holistic approach to development (Dirkx 2006). Using a holistic approach to higher education was advocated by Shoja and Mahdavinia (2011) in Iran, and Miller (2007) describes its importance in Japan.

Integrated Holistic Pedagogical Model

The word *holistic* is used in many contexts in education, such as holistic assessment, holistic curriculum, or holistic lessons. Some of the definitions for

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how the word is used include accomplishing a task by involving more than one area of development, often recognizing the social and emotional aspects of learning, but neglecting the creative, spiritual, or intuitive. While we applaud these efforts, our intention here is to include what many (Haynes 2009; Miller 1991) define as the four aspects of development: the cognitive, emotional, physical, and spiritual.

The foundation of our holistic model is the two Jungian personality processes of judgment and perception, each with two functions, which results in the four functions of sensing, intuition, thinking, and feeling. These four functions are used as a guide to integrate development across the curriculum and pedagogical interactions with students. The four quadrant model as presented in Figure 1 below is a modified version of Clark's (2002) conceptualization of intelligence based on brain functions.

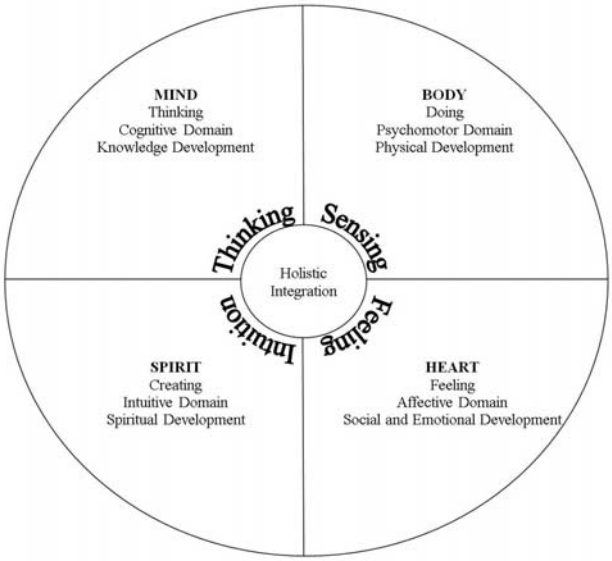

Figure 1. Holistic Integration: The Four Quadrants

The circular portrayal of the four functions reflects the concept of the medicine wheel and the holistic representation for humans in balance with others and nature (Roberts, Harper, Bull, & Heideman-Provost 1998). Although the medicine wheel philosophy appears in different ways among American Indian tribes, it consistently is comprised of four quadrants representing direction (east, south, north, west), lifespan (birth, youth, adulthood, aged), or developmental areas (mind, body, emotion, spirit) (Meadows 1992, 1996; McCabe 2008; Roberts et al. 1998). Holism, balance, and harmony typically intersect in the center of the circle, which is often considered an outcome of healthy and fulfilling work in all four areas. Holism has been described as a goal for all humans by Gerber (2001), called Ultimacy by Forbes (2003) or individuation by von Franz (1964). Using the four quadrant model with all students appears to reflect a holistic learning experience. Varghese (2009) has provided such a model for teaching mathematics by blending direct instruction and the four quadrants of learning.

The Thinking World of the Mind

The Jungian process of judgment has two functions represented by the thinking quadrant and the feeling quadrant. Cognitive skills, making inferences, critical analysis, and comprehension of complex knowledge and information typically fill the college curriculum and will be characterized as the *mind* quadrant. This quadrant has been typically overemphasized in the traditional school curriculum. This emphasis can be seen in the fact that college entrance tests like the SAT and ACT measure verbal and quantitative abilities, both of which fall squarely in the domain of thinking or the *mind*. Nevertheless, this domain includes important skills such as analysis, problem-solving, comparing and contrasting, understanding and applying theory, and understanding how the same facts apply to new situations. These have been traditionally emphasized as important in higher education, occupying the highest steps on Bloom's taxonomy (Bloom, Englehart, Furst, Hill, & Krathwohl 1956), in the form of application, analysis, and evaluation (although recent revisions have suggested that creation belongs at the top of the taxonomy). The *mind* quadrant addresses many important developmental outcomes, including problem-solving skills, the ability to apply theory, to analyze and synthesize information, and to think critically. These outcomes are important developmentally. Individuals who develop better critical thinking skills score higher on tests and quizzes (Williams, Oliver, & Stockdale 2004) and are more successful in college in general (U.S. Department of Education 2005).

The Feeling World of Human Social Experience

In our model, the feeling function encompasses aspects of the affective domain, including individual emotional development as well as the development of social relatedness. The social and emotional needs of teachers and learners combine to bring the authenticity, humanity, and ethical dimension to the *heart* quadrant. This area has been instrumental in the work of several developmental psychologists. Other related work in this domain would include moral and ethical development and emotional regulation. Overall topics related to education focus on the need for the development of empathy for increased prosocial behavior and decreased bullying. Other more recent work on multicultural education and social justice emphasizes the feeling function to increase diversity, lessen stereotype threat, and interrupt power structures. The feeling function can also be conceived as a manifestation of the heart. On a more global scale this area includes work related to our feeling of connection to others and the need to work together for common human goals.

The Physical World of Sensing

The sensing function represents the *body* and physical, concrete experiences. The process of perceiving the environmental characteristics and the sensory notation of the lived experience fulfills the objectives of this quadrant. The sensing function is the psychomotor domain or the body quadrant. The process of perceiving the environment and the sensory information of personal experiences lie within this function. It is important for individuals to incorporate information, sensory data, and their instincts to appropriately take action within the educational context and transfer that knowledge into practical real world use. The body quadrant in curriculum planning relates to embodied learning through active doing, and methods might incorporate reviewing past and present experiences, recalling incidents, seeking detailed information, and comparing and contrasting similar situations which result in the ability to draw on the lessons of history, hindsight, and experience.

The Imaginational World of Intuition

The complementary function to sensing is the *spirit* quadrant which represents creative energy and spiritual and imaginative abilities. Although much has been written about spirituality, it is seldom included in the curriculum in public schools, colleges, and universities. Intuition is difficult to define; however, Epstein (2010, 296) suggest that "intuition involves a sense of knowing based on unconscious information processing." Bringing the unconscious to consciousness was accomplished by Jung through art, sculpture, word association, and dream reflection (Forbes 2003). Insight and imagination are necessary components of creative thinking and behavior (Piirto 2004) that bring innovation, openness, and problem solving, all of which are skills deemed important for 21st century learning (Piirto 2004).

Educational Outcomes Addressed in This Model

One problem with traditional educational models, wherein students are given information, asked to memorize it, and later repeat it, or to analyze and report on the information, is that these types of activities do not directly produce outcomes that many educators and employers seek. Nor is the unconscious or emotional life considered a source for processing information. For example, cognitive types of tasks do not encourage a deeper archetypal imagination, creativity, or the production of new knowledge or problem-solving skills. Yet, this set of abilities has been cited as among those that employers most desire in college graduates, and that educators most commonly state they wish to instill in their students (Rhodes 2010). Social skills and teamwork are essential life and workplace skills, yet the traditional education model does not directly address them. The quadrant model of holistic education provides direct educational work in all of these outcomes, including creativity, innovation, producing new knowledge, problem solving, emotional skills, working with others, as well as hands-on experience and knowledge, and the traditional areas of education such as fact-based learning, analysis and synthesis of information, and integration of theory. In this way, this model provides a practical way for educators to address desired educational outcomes in a direct, intentional manner.

The Four Quadrant Model in Action In the University Setting

Our team of four university instructors met to systematically design curricula, implement four-quadrant instructional strategies in coursework, and reflect on the congruence of the four-quadrant model to the holistic goals of our teaching. Our team consists of a senior professor, who met with three doctoral students: one doctoral candidate with broad teaching experiences, one first-year doctoral student new to pedagogy, and another doctoral student with deep experience in teaching psychology. The senior professor started her career teaching regular elementary grades and special education for gifted learners, followed by over two decades of teaching undergraduate and graduate students. We met twice a month for one academic year to discuss the reflective data and to analyze reflective journals of teaching experiences. We found it important to keep the metaphor and meaning that the teaching experiences brought in us and to reflect on our own role in the teaching and learning interaction. In our attempts to remain true to holistic education theory, we questioned our own holistic development, mindful of Luvmour's (2002, 15) comment that "…holistic education theory and practice are firmly grounded in the notion that the teacher and student develop simultaneously."

What follows are reflections on our own practices and how the four quadrant model of holistic education was incorporated in various settings. The educational settings included a career and technical school; online and face-to-face undergraduate courses in child and adolescent development, creativity, motivation, and emotional intelligence for pre-service teachers at a university; and graduate coursework in educational psychology. We will describe how we applied the model and how this model enriched our teaching experiences, our interactions with students, and the outcomes we experienced from our students.

Applications of the Model

This model of education fits well with a variety of higher education classrooms, in which the coverage of these quadrants has typically emphasized the cognitive area. Higher education students can be engaged in our model of holistic education through a variety of activities. We began by reflecting on our courses as they had existed prior to our application of the four-quadrant holistic model. We found that typically the cognitive area had been strongly emphasized, with very little emphasis on intuition or feeling. In those courses that were part of the teacher preparation core, we discovered a different emphasis, where there was more attention given to the sensing and feeling quadrants. However, in no course did we find an *integrated* holistic approach. We therefore endeavored to find ways to more deeply involve all four quadrants of the students (and by extension, ourselves) in the learning process.

Community Experience

An essential application of our model was the opportunity for students to design and implement projects in the community. Students took the theoretical knowledge of a subject that they had learned in the classroom and were invited into a community-based organization to test those theories in action. This engaged not only the *cognitive* quadrant, but also the *psychomotor* quadrant by bringing theoretical knowledge into physical reality. In many cases community involvement engaged the *heart* quadrant as students participated in service-related activities during the semester, routinely making connections to others within society. For some students, the experience with these organizations led to additional involvement with the community.

Semester Long Projects

Another broad application was the use of semester-long projects to engage all four quadrants of this model. For this project, students began by conducting research on a subject of interest. Students could choose either performing traditional academic research or conduct interviews with community members and/or leaders. This fact-gathering activity led to analysis and synthesization and a short paper that integrated the research with material from class and came to conclusions about the problem or topic of choice. Next, students were assigned to prepare a reflective paper on how this information pertained to their own career choice, how they could use what they learned, and how this information related to their experience, which was then in-

tegrated with the earlier research paper. The next step was the creative component of the project, which could be more involved for a longer course, or less involved for a shorter one. This involved students creating some kind of an action plan, or a way of utilizing the information they have gained. For some, this meant partnering with a local business or organization. For others, this meant coming up with a business plan, or presenting a plan on how to improve an existing business or product. The project concluded with a presentation of the research information, reflection, and creative components to the class. Many students went on to successfully implement their creative components at their current place of employment, or to use their creative components to gain entry with their local business partners. This project engaged all four quadrants of the holistic education model presented here throughout the semester, and helped students turn their classroom knowledge into real-world applications.

Research Papers

We found that with practice our traditional writing assignments could be easily adapted to integrate the four quadrants of the model by breaking down the process and encouraging deep exploration at each level. For example, when one assignment asked students to write about learning theories, the student was asked to first look up a learning theory from the text, then describe the key terms, concepts, and ideas from that theory. Next, they related this information to other contextual ideas. They then described the theories that were most related to their own personal experience and explained why they felt it was so. Finally, they related the information to their intended future careers and noted how they might use this information later. Asking students to write about each of the four quadrants of the holistic model can easily be applied for any given topic. Later the students would create artifacts for portfolios or classroom materials that would be helpful in their future careers.

Another writing assignment that utilized the holistic model created tasks that addressed all four quadrants by requiring the student to create, think, feel, and act within the scope of the content. For example, one research assignment required the students to summarize, analyze, reflect on, and develop the implications of a specific topic. The first step required the students to gather and summarize three peer-reviewed developmental journal articles. This step addressed the psychomotor quadrant by finding and presenting relevant information. Students then analyzed and synthesized the information against two theories presented in their course textbook, thereby addressing the cognitive quadrant. Students incorporated a personal reflection on their connection with the newly gained information from within the social emotional quadrant. Finally, students discussed the future implications of the information for the field and their future careers, which attends to the intuitive quadrant. Each quadrant was weighed equally by allocating points evenly across the sections.

Journaling

Other types of writing besides traditional academic papers are also beneficial to students' holistic development. One class incorporated a semester-long journaling assignment. The last ten minutes of every class period were set aside for the students to record their thoughts, feelings, knowledge, or experiences about the lecture topic of that day. While some days were reserved for freestyle writing about the content, a prompt was often written on the board for their journal entry to focus on one of the four quadrants.

Movie Critique

Movie critique projects allowed the students to stretch their new knowledge base and apply holistic skills to common practices. The students were encouraged to choose any movie that depicted a character or characters who experienced successful or unsuccessful emotional development, self-directed learning, or success. Each student had to thoroughly analyze their films and connect them to the concepts discussed in class. This analysis component activates the cognitive or *mind* quadrant. For this particular assignment the students could either prepare a written paper or create a presentation. Depending on the student's choice, this psychomotor component either required them to display the information in written form or actively present to their classmates. How the students performed either of these tasks involved a

creative component of language, organization, or visual stimulation, connecting to the intuitive quadrant. The final task for all students to incorporate into their projects was a reflective piece that connected each student personally with the characters they analyzed. This final component united the affective or *heart* quadrant to the previous three, providing a student a holistic journey through a single assignment.

Group Project

Another example of a holistic application was a group project assignment. The students choose the developmental topics their groups were to explore and presented their findings to the class. Each group first designed a formal project plan that outlined the specific details of their project, allocated responsibilities, and created a structured timeline for task completion. By working collaboratively and mindfully on projects that included the four quadrants, students developed vital skills in building equitable and effective teams. Students routinely commented on how they were able to assign and assume tasks based on each person's strength, which meant that while team members were not contributing the same type of work, each felt that their contribution was as meaningful as those of their peers. The groups then gathered and synthesized critical information and supplies to meet their project goals. They had to collaborate to make connections and analyze their material with information from the textbook and their own personal experiences. Finally, the groups imaginatively and creatively presented their project discoveries to their classmates. The projects were evaluated on criteria from the four quadrant model with points evenly distributed. Evaluations were provided by the instructor and the class members, reinforcing the collaborative learning community by giving feedback as gifts to each other.

Online Courses

As more universities and colleges incorporate online teaching into their degree programs, the involvement of holistic education in the development of online courses becomes important. There are a number of ways this can be effectively accomplished while meeting curricular goals.

For example, many online courses are heavily discussion based. A minor revision of the discussion questions helped them more fully develop the student in accord with the four domains presented in this article. For example, the psychomotor dimension might be addressed by traditional memory and understanding questions; a cognitive question might involve analysis, comparison, or integration; an affective question might address reflection and personal application; and an intuitive question might involve a imaginative, innovative, and creative look at the course material. The ideal mix of questions will depend on the subject matter and the level of the course, but splitting the questions between these areas will help students develop more holistically through their discussions.

Online course projects were also holistically developed. For example, one successful course project involved a multi-step process of writing a research paper with personal reflections, career applications, and creative components. At the end of this process, students would have written a quality research paper, integrated personal affective experiences, applied the material to their own careers, and created a way to innovatively apply what they had learned. This project was presented in steps so that students submitted a portion of the assignment each week of the semester. The focus on each step helped with common problems in the online course format, such as attrition and perseverance among online students. Most important to the instructor experience was that the focused work at each step allowed for constant feedback and an accommodation of all areas of development for each student. We were surprised how easily this project engaged all of the areas of the holistic model outside the classroom.

Our Teaching Experiences

Student-instructor and student-student interactions were noticeably improved by emphasizing the feeling or *heart* quadrant of the model. We noticed that our students felt the need for the environment to be psychologically secure with the development of ground rules for class participation. These discussions were guided by aspects of the affective domain, such as the need for being prepared, showing mutual respect, and welcoming diverse viewpoints.

We found that this emotional connection led to more students coming to office hours or sending casual emails to clarify assignments, negotiate processes, and ask for assistance. Course evaluations from classes in which the holistic model was used revealed that students appreciated the instructors' feedback, timeliness, and concern. Comments about the instructors indicated that they were perceived as caring about student progress, which was linked to overall learning and enjoyment of the course. Because these students felt that their instructors had an investment in their learning, they invested more of themselves in the course and consequently got more out of their classes. Yet, in our reflections, we now recognize the dramatic need to enhance the *spirit* quadrant by going beyond creativity to include deeper connections, exploring consciousness (Montgomery 2012) and spirituality.

Students who had been given a stake in developing class guidelines for appropriate behavior were well prepared to discuss and build upon their peer's comments. This was especially noticeable in the online courses when the discussion threads became deeper and more meaningful. Assignments such as journaling and peer evaluation that encourage reflective behavior helped students develop skills in emotional regulation, time management, and critical thinking. By giving students a chance to receive and give peer feedback, they were able to enhance their evaluative and communication skills and develop more professional-level products for use in their careers.

Our satisfaction with this pedagogical model was enhanced as we experienced the positive outcomes of the learners. The evidence on student learning outcomes was derived from various types of informal assessment, student surveys, informal comments, and the observations and reflections of our team of experienced teachers. We do not have formal empirical analyses of results of differences between classes taught in the holistic education paradigm described here and other classes; instead, we have a much richer picture of student learning outcomes that emerged from our experiences working with them, observing their interaction with each other, hearing their comments about the course content, seeing how they engaged with that content, and noting how they tended to work in the classes. Indeed, as our experience with applying the holistic model in our courses grew, so did our appreciation for the unique and balanced outcomes in students. It is from this rich experience of working directly with students, understanding their experiences with our courses, and observing how these experiences differ from courses taught in other paradigms that we make the following observations.

Students, although they often experience some discomfort at being asked to "stretch" and "flex" their strengths and weaknesses in class, generally grow to enjoy classes taught in this paradigm more than those taught under other paradigms. We believe it is essential to explain the model to students, including the theoretical reasoning underlying the approach. This explanation leads to the ability for learners to go beyond the level of "trying" to learn to a more authentic learning where they are fully engaged with the content as a whole person. We observed that students tend to show deeper content knowledge and the ability to connect concepts and theories, and apply them, particularly on final exams. Further, students reported on surveys and in informal conversations that they subjectively felt more engaged with the content, that they learned more, and that the content was more applicable, even though the content remained unchanged. It is only the method of teaching that changed, yet student outcomes seemed to be quite different. Anecdotal evidence gathered from instructors about the students in subsequent academic terms also seemed to indicate they continued to look for deeper learning experiences and to engage more fully with their learning after having experienced this model of holistic education. Students reported a deeper sense of a learning community and support from classmates. Further, based on this same anecdotal evidence, it appears these students have greater long-term retention of content than students in comparable classes taught under other paradigms.

By engaging the whole person — creativity, cognitive abilities, emotional capacities, and the physical dimension of the person — the student experiences several improved outcomes that are important in the education system. First, students appear to become more engaged generally with their learning.

Second, enjoyment and interest in the classroom appear to be higher, which are related to a host of motivational variables. Students also seem to learn at a deeper and more integrated level, as evidenced by an analysis of their exams compared with their knowledge of other course exam content. Finally, our approach seemed to create longer lasting knowledge and an attitude toward learning that is at least somewhat persistent, based on the reports of other instructors the students have in subsequent terms. In short, the four-quadrant holistic educational model appears to improve student learning outcomes.

Conclusion

Recognizing the importance of personality typology in the learning process for all ages, we are using it to plan, implement, and assess the teaching and learning in our college and university courses. However, by planning for holistic growth in the four areas of psychomotor, cognitive, social and emotional, and creativity, we believe that developmental potential is realized and the integration of other personality areas are strengthened.

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Book Review

Educational Courage: Resisting the Ambush of Public Education

Edited by Nancy Schniedewind and Mara Sapon-Shevin

Published by Beacon Press (Boston, 2012)

Reviewed by Liza Womack

If you are feeling disheartened about the current state of public education, then *Educational Courage* is just the shot in the arm that you need. It is a book for schoolteachers, school administrators, professors of education, parents, students, and anyone else who cares deeply about the current attack on public schools in the United States. Nancy Schniedewind and Mara Sapon-Shevin have compiled a diverse collection of chapters written by Kids As Self Advocates (KASA, an activist group of students with disabilities); the Nebraska state commissioner of education; a former Teach for America teacher; public school teachers from Arizona, Chicago, Poughkeepsie; and the parent of an eleven-year-old. The voices in the articles speak forcefully and with purpose to the reader. They give the reader not only hope, but also advice and encouragement.

Schniedewind opens the book with a clear description of the rapidly escalating attack on public schooling since the implementation of No Child Left Behind (NCLB) in 2002. She notes that Obama's track record on education is no better and often worse than George W. Bush's. While NCLB took the carrot-and- stick approach to "improving" public education by rewarding higher scores on standardized tests, Obama's Race to the Top (RttT) takes both the carrot and the stick even further. RttT, currently in place in 47 states, requires that states open up their school districts to increasing numbers of charter schools (a burgeoning and profitable industry), and it mandates that states evaluate teachers using their students' test scores. This practice, ostensibly to "hold teachers accountable," puts many teachers in a vulnerable and untenable position. Teachers in low-income and poverty schools are more likely to receive poor scores, labeling them as "ineffective." Teachers in high-income schools are more likely to receive adequate or high scores, labeling them as "effective," or "highly effective." Schools with poor test performance are often closed. Staff is fired, and a charter school (often for-profit, and often with non-union faculty) is re-opened in its place. What most people do not know is that, while charter schools receive money from public funds, they are typically not required to follow public school mandates. For example, charter schools may pick and choose which students they want to admit. Poorly performing students are either not admitted in the first place or are "counseled out" before it comes time to take the standardized test.

One specific example of this phenomenon is outlined by Julie Woestehoff in her chapter "'Just Parents' Challenge Mayor Daley, Arne Duncan, and Renaissance 2010." She is the executive director of Parents United for Responsible Education (PURE) and co-founder of the national parent organization, Parents Across America. Woestehoff reveals the damning truth behind Obama's celebrated Dodge Renaissance Academy, a charter school opened in a former public elementary school building. After the public school was closed down, the Renaissance Academy, run by a private management company, was opened in its place. Two years later, the student test scores rose markedly, an apparent vindication of the policy of closing "failing schools," firing staff, and running

Liza Womack began teaching at the Cold Spring School in New Haven in 1988. She learned about the intellectual challenges and rewards of working with young children in this school, which was child-centered and modeled on Bank Street. She was given several great books by her mentor there, Penelope F. Serafin, including *The School in Rose Valley* (by Grace Rotzel), and *What's Whole in Whole Language* by Ken Goodman. She has also taught first, second, third grades in Connecticut, Pennsylvania, and New York, and English to French children in Paris. Currently, she is teaching first grade on Long Island and giving workshops to teachers on Writing Workshop.

the new school on a corporate model. In 2006, Dodge Renaissance leapt past its sister schools in state test scores and "logged the city's largest overall state test score increase" (p. 158). However, Secretary of Education Duncan and President Obama failed to reveal that only twelve of the original 336 students from Dodge Elementary attended the new Dodge Renaissance Academy. The data showing the "miracle" of the charter school versus the "failure" of the elementary school were at best useless and any conclusions based on comparing apples to oranges were clearly distortions.

That charter schools pick and choose the students and families they know will make them look good on their performance on standardized tests is an important point for all education activists and public school advocates to understand. Geoffrey Canada, who started the Harlem Children's Zone, uses a lottery system to "cream" or cherry-pick students from a neighborhood population. This was portrayed in the movie, *Waiting for Superman*. Students who live in families motivated and organized enough to enter and attend a lottery are already at an advantage over those children whose families are not. They make the charter school look better than its public school sister, which, by law, must accept and teach a*ll* students. Charter schools have another advantage in the battle for high test scores; they can "fire" or "counsel out" any student they wish. Geoffrey Canada kicked out an entire class of fifth graders in his Harlem Children Zone who were not performing at an acceptable level.[1] Charter schools, unlike public schools, also benefit from corporate and foundation financial support, so the Harlem Children's Zone, for example, is able to spend three times more on each student than the New York City public schools. (Fabricant & Fine 2012, 30)

In her opening discussion of the corporate model for public schooling, Nancy Schniedewind writes,

> The free-market doctrine has shifted focus away from improving how students learn to making wide profit margins for testing corporations and educational entrepreneurs. While educators have long identified problems with schools, especially urban schools, it was only when corporations saw the potential of using tax dollars for profit that businesses and hedge funds began pushing their agenda for public education. (p. 20)

Bill and Melinda Gates, the Koch Brothers, and the Broad and Walton Foundations use phrases like "choice," "accountability," and "effectiveness" to break teacher unions, close public schools, and open for-profit charter schools that use expensive, scripted curricula — a cost born by school districts to ensure teacher accountability. Two other chapters in this first section of the book describe the emotional costs of this public school ambush: an elementary school student, terrified by his high-stakes test, is hospitalized with a nervous breakdown, and a demoralized veteran teacher describes the toll high-stakes testing has taken on her special needs students.

Although Part One is depressing, I encourage you to keep reading! Do not lose heart. The rest of the book will arm you with the stories and strategies you need to keep up the struggle for our children. Part Two shows the reader the myriad ways many people are resisting and fighting the attack on public schools. Student groups conduct qualitative research on exit exams; an eleven-year-old refuses to take the test; a charter school teacher organizes a union to give the teachers a voice in the decision-making process; noted education and child psychology expert Alfie Kohn critiques the Common Core State Standards as "devoted more to serving the interests of business than to meeting the needs of kids" (p. 41); and the Nebraska state commissioner of education and a professor of English team up to work with teachers to design their own school-based assessment systems.

In Part Three, teachers discuss finding ways to teach "in the cracks." We learn that, even in this climate, creative and brave teachers continue to do what is right by their students. Felipa Gaudet, in her story of the recovery of an abused kindergartener, reminds us that school needs to be a place where our youngest learners have the comfort, support, and space to learn social and emotional skills, which are far more important than early academic skills for future academic success. Gaudet gives her principal credit for the freedom to provide the necessary environment for Ivory to express herself as she recovers from physical abuse. Gaudet writes:

> Had my principal forced me to conform to rigid benchmark targets, at the exclusion of the curriculum that springs from the children, Ivory would have been denied the opportunity to heal and learn during a critical period in her life. The result could easily have been devastating not only for her education but for her long-term well-being and survival. (p. 111)

The stories in Part Four, about organizing for resistance in the face of the onslaught, read almost like a "how to" for teachers and parents. This is the section to make you feel hopeful and inspired, for you are not alone! A third-year New York City teacher decides to stand up against merit pay and designs leaflets educating his colleagues on its negative impact. The teachers vote down the proposed plan resoundingly. He shares the leaflet with the NYCore Listserv (another 1,500 people). Twelve high school teachers in Chicago begin talking to each other at lunch and decide to stand together to refuse to give the end-of-semester standardized test, and days later the entire district stops administering the test. Parents, teachers, and community organizations such as the local NAACP, build a coalition in Milwaukee to stop mayoral control of schools and the "dismantling of the democratically elected nine-person school board" (p. 143). Parents in Washington organize a media blitz,writing letters to the editor and press releases, to inform other parents of their children's right not to take the state test. An eighth grade teacher designs a ballot initiative to get rid of the state test in Colorado. In the process, thousands of families are informed of their right to "opt out" of the test. Parents in New York organize against high-stakes testing and the inequity caused by the creation of charter schools within New York City's public school buildings.

The most powerful and resounding words come in Chapter 23, "What Endures: Meaningful Assessment for the Long Haul." Chris W. Gallagher and Doug Christenson advise the disheartened, the exhausted, and the weary to hold onto their anger, and to harness it and put it to use. They remind us that "democracy is a long-term project" (p. 176). Gallagher and Christenson invoke the words of Myles Horton who started the Highlander School in Monteagle, Tennessee, where Martin Luther King, Jr. and Rosa Parks learned organizing and resistance strategies.

> I had to turn my anger into a slow burning fire, instead of a consuming fire. You don't want the fire to go out — you never let it go out — and if it ever gets weak, you stoke it, but you don't want it to burn you up. It keeps you going, but you subdue it, because you don't want to be destroyed by it. (p. 176, quoted from *The Long Haul*, p. 80)

This chapter reminds me to do what I know is right for my students, trust them, and teach them how to assess their own learning. I am reminded that the purpose of assessment is to inform my instruction, and that I need to put my fears of corporate-based "assessments" for "teacher accountability" into perspective. Gallagher and Christension end the chapter with another quote from Myles Horton. I believe that this is the most important message to take away from *Educational Courage*, so I repeat it here:

> Birds will take advantage of a tailwind, and when the wind is blowing the other way, they'll hole up. They won't exhaust their strength going against that wind for long when they'd make only a few miles a day or get blown backward. They rest, because if they rest that day and restore their strength, the next day they can much more than make up for what they lost by not going…. They change their course year after year on the basis of the particular situation. They never come back exactly the same way twice because the conditions are never the same, but they always get to their destination. They have a purpose, a goal. They know where they are going, but they zigzag and they change tactics according to the situation. (p. 182, quoted from *The Long Haul*, pp. 198-199)

I understand from this that I need to fight where and when I can, and that the fight can take different forms. It can mean finding spaces in my district's curriculum to teach authentically. It can mean passing information along to education listservs. It can mean making my voice heard in my local faculty association. It can mean joining Save Our Schools or it can mean participating in public protests. *Educational Courage* gives me strategies, strength, and courage to keep up the fight for what is right in public schools. I encourage you to read it, and use it, too.

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Note

1. Fabricant and Fine (2012) and Ravitch (2010) discuss in depth the issue of unfair comparisons between public schools and charters.

Book Review

The Taste of War: World War II and the Battle for Food

by Lizzie Collingham

Published by Penguin (New York, 2012)

Reviewed by Alan Singer

Sometimes, but rarely, an author or historian puts together ideas and explanations about the past that transform the way we think and teach about major historical events. They also introduce ideas that have implications for the way we think about present crises and ways we can potentially reorganize human society in the future. I think Lizzie Collingham has done that in *The Taste of War: World War II and the Battle for Food.*

According to Collingham, World War II was precipitated by a desire on the part of different European nations to secure their food supplies to promote growth and prosperity and to ensure success in potential military conflicts. It was also a war in which access to food by both military and civilians on all sides played a crucial role in the outcome. Today when climate change threatens to disrupt established food supplies it is crucial that the general public and people making difficult political and economic choices understand that unless environmental problems are resolved, food shortages, even worry about future food shortages, could once again bring the world to the brink of a global conflagration.

A second important contribution by Collingham is the way she shifts our understanding of the causes of World War II and the European Holocaust away from ideological battles between fascists, racists, communists, capitalists, and democrats. Eric Hobsbawm, author of *The Age of Extremes, A History of the World, 1914-1991* (1994), believed anti-Semitism, Fascism and "totalitarianism" played only minor roles in events leading up to World War II. He argued that World War II was neither fought over the fate of European Jewry or to spread or stop totalitarianism. Instead, it was a continuation of World War I after a brief respite to rebuild, rearm, and repopulate. According to Hobsbawm, the second round of the war started when Germany was attacked by England and France because of Hitler's attempt to create a pan-German nation that included territories that had been stripped away from the Germanic central powers at the Versailles peace conference in 1919 (Austria, the Sudentland in Czechoslovakia, Alsace-Lorraine in France, and western Prussia in Poland). In this interpretation, the war would have taken place as soon as Germany had sufficiently recovered from World War I, regardless of the emergence of Hitler or Fascism. I believe Collingham's examination of the pressure on Germany to expand the food supply available for both the homeland and an expanded imperial Germany provides strong support for the Hobsbawm thesis.

As a high school social studies teacher, I have grappled with how to present multiple perspectives on the European Holocaust that did not trivialize what happened or open the door for unsupported holocaust denial. I was raised as a Jew in the years after World War II and was taught that there was something unique and twisted about the German "national character" that brought Hitler to power and produced Nazism and the Holocaust. My father, who had close relatives exterminated by the Nazis, would not allow my younger brother and me to buy "flower power" Volkswagens because of their origins in Germany during the Nazi era. This position was supported by the work of Louis Snyder, an historian at my alma mater, the City College of New York. In *Hitler and Nazism* (1961), Snyder cites A. J. P. Taylor, who argued that "[t]he history of the Germans is a history of extremes. It contains everything except moderation…" (39). In

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addition, Snyder claimed that there are basic facts on which "historians do not differ," such as that Hitler's "clear purpose was to destroy European civilization and replace it with a barbarian empire" and that "[t]he Germans accepted him as the Messiah for whom they were waiting. This political monster brought disaster and ruin both to Germany and the world"(pp. 40-41). Collingham's focus on food supply and concern over food shortages, especially in the event of war, provides a strong alternative to this historical explanation for why Nazi Germany turned on its Jews and other minorities and why discrimination turned into genocide.

Historians tend to focus on individuals, contingencies, and ideological and economic "isms" as the underlying causes of World War II: communism, fascism, capitalism, imperialism, nationalism, racism, and anti-Semitism. Collingham, however, makes a powerful materialist argument that struggles between people, nations, and empires, while they are often explained in ideological, religious, and political terms, are rooted in struggles for the things needed for survival which today includes access to reliable sources of food.

I generally do not like to play "what-if" as a historian or teacher because there are so many contingencies that we cannot really construct a useful alternative past. I confess, however, that sometimes I cannot help myself. What if Zheng He and the treasure fleet had continued their fifteenth century voyages of discovery and China had not turned inward? Would China have colonized the rest of the world? Would we all speak Chinese? What if Lenin and his colleagues had not gotten on the train that took them from Switzerland to Russia? Would there have been a Russian Revolution, the Cold War, and a space race? What if Hitler had some talent as a painter, or if the little corporal had died with so many of his generation during World War I? Would there have been a World War II? If Collingham is correct, and I am convinced that she is, World War II would have occurred, although not in the exactly same way, if neither Lenin nor Hitler had ever lived.

Access to food, and the ability to limit the access to it by opponents, was important during a prolonged war because at least 20 million people died from starvation, malnutrition, and vulnerability to disease caused by food shortages; at least as many as died from military action (p. 1). Collingham asserts that a major reason virulent German anti-Semitism led to genocide was because at a time when Germany was threatened with potential food shortages, Jews and other *untermenschen* (undesirables) were seen as "useless eaters" (p. 7). Even orthodox capitalist regimes learned from World War I "that a free market could not be relied upon to both mobilize a nation's resources and protect the population's access to the necessities of life" (p. 501).

The first two chapters of *The Taste of War* are outstanding on their own and worth the price of purchase. Collingham describes in scientific detail and eminently readable prose the impact of food shortages and malnutrition on civilian populations, particularly essential calory-starved workers. Deprived of sufficient calories, the human body begins to consume itself in order to perform normal bodily functions, even breathing (p. 5). Muscles atrophy first and eventually the body reabsorbs its own internal organs, leading to death (p. 6). All of this happened while the demands of war, both in combat and in heavy industry, required that individuals consume even greater amounts of food.

At a time when all of Western civilization appears to be on a diet, Collingham explains, in an interesting fashion, the importance of fat in the human diet. Fat adds to the flavor of other foods and helps to "stave off hunger pangs" (p. 13). While people, even those engaged in hard physical labor, can satisfy caloric intake requirements by eating no animal fat, they would have to eat such a large volume of carbohydrates that they would need to be eating all day long. Today, as seen in the New York City battle over the sale of oversized sodas, we seem overwhelmingly concerned that people are ingesting too many unnecessary calories. However, large areas of the world, particularly sub-Sahara Africa, still face food shortages. Future climate change affecting the growth patterns of staple crops may turn this debate on its head as people scramble to secure all the calories that they can, especially tasty and concentrated fat calories.

Following the agricultural and Industrial Revolutions of the 18th and 19th centuries, the capacity of Europe to produce food was vastly increased and was supplemented by food imported from imperial em-

pires. However, European society remained vulnerable to food shortages because urbanization and population increase required an efficient network of distribution. In addition, a shift from grain to meat consumption among urban working-class populations meant that grain production had to increase to feed farm animals and governments were more susceptible to political unrest if meat was in short supply. This transformation made access to food for soldiers and civilians key to success in war, particularly extended wars such as World War I and World War II.

Collingham argues that 19th century Japan and Germany saw themselves as trailing the United States and Great Britain in industrial growth and food resources. Both sought empire to secure adequate food supplies, Germany in Eastern Europe and Japan in China, making war in Eastern Europe and the Pacific "inevitable" (p. 2). Collingham argues that increased prosperity in China and India has changed eating habits; the middle classes want meat and dairy products. As a result, Chinese per capita consumption of meat nearly tripled between 1980 and 2007 (p. 3). Enormous quantities of grain that once were used to feed human beings is now being used to feed animals that supply meat and milk. This has made food prices much higher across the world at a time of increasing urbanization and increased hunger and malnutrition in the poorest parts of the world. Recently, the food import bill for Africa south of the Sahara increased fourfold over the course of a decade, even though African nations actually imported less food.

A major issue in the book is how much wartime civilian deprivation was a consequence of war and how much was the result of conscious policy choices. Collingham leans toward the conscious policy side of the debate, although she is not totally convincing. A major focus in the book is on Herbert Backe, a Nazi Party agronomist who served as Minister of Food and then Minister of Agriculture. In his Hunger Plan, Backe proposed diverting Ukrainian foodstuffs away from Russian cities to feed the German army. He wanted to starve the Russians and eventually create a German colony in the Ukraine. While a million people died of starvation in Leningrad and hundred of thousands in Kiev and other Soviet cities, it is not clear whether this reflected the implementation of an actual genocidal plan. Backe was a Nazi ideologue, war criminal, and amoral monster who systematically implemented some of the worst horrors of the Nazi regime. However, Collingham's main point is that the use of food and starvation as a weapon of war was necessitated by modern warfare, not the work of a single madman. Hunger was a major weapon against Germany in World War I and probably in every battle in human history where enemy troops held urban centers under siege. In her conclusion, Collingham points out that food quickly became a weapon during the post-World War II Cold War as the United States offered aid to counter Soviet and domestic communist influence in Europe, but not to countries with communist governments.

While Collingham has a great idea, this is not a great book; five hundred pages of supportive detail and another hundred pages of footnotes and bibliography are numbing to the reader. There is so much here that I think even Collingham at times loses track of the importance of what she is asserting. Even at the start of the book, Collingham backs off a little from what will become her principle argument when she issues a disclaimer that "the focus on food is not intended to exclude other interpretations but rather to add an often overlooked dimension to our understanding of the Second World War" (p. 2). However, including other dimensions does not negate her broader point about the material causes of the war and that access to food is essential for national survival. In a sense, the global battle for access to oil, so important in the Pacific Theatre during World War II and ever present today, is also a battle to ensure national food supplies.

After making the case for the importance of food in shaping world historic events, Collingham concludes that because European countries immediately applied lessons learned during World War I "when Germany ran out of bread, potatoes and the will to fight (p. 464)," they rationed food from the start of World War II. In England and Germany the civilian food supply was monotonous but sufficient to maintain national morale, especially in England's case with the support from the American breadbasket. Japan, on the verge of mass starvation when the war was ended by the nuclear attack, was threatened with a potential civilian revolt that never manifested itself. Soviet citizens, fearful of the consequence of

German victory, endured despite hunger. As a result, Collingham decides, "the Second World War in Europe was not determined by food" (p. 464). Yet of course it was, certainly in places like Greece and India where people starved, for the millions of "useless eaters" who died from malnutrition in ghettoes and concentration camps, and for the besieged in Soviet cities. But it also played a major role as Germany and Japan were forced to struggle to secure access to food while Great Britain and the United States were able to draw from the bounty provided by the American Great Plains.

As always, sweeping books such as this one by Collingham generate numbers of small, though not inconsequential, points of disagreement. I would argue that the planned use of food as a weapon is not the same thing as hunger as an unplanned consequence of war, although its impact may be similar. To consider them both as genocide detracts from the book's historical significance. I also think Collingham weakens her arguments about the use of food as a weapon when she compares forced food shortages and efforts to eliminate useless eaters in Europe with racial discrimination in United States food rationing programs (p. 11).

On balance, this book is a very valuable resource for history teachers and educated general readers. It makes clear how for Germany and its opponents during World War II food was an underlying cause of the war, a pressing strategic concern, as well as a weapon to be used against both enemies and those considered "useless eaters." Unfortunately, with global warming and climate change I suspect human kind is just starting to witness the next round in what may be a catastrophic battle for access to food.