



JUMP TIME

Shaping Your Future in a World of Radical Change

CHAPTER THREE WITH SATCHEL AND SHINING MORNING FACE

Consider the problems today's young people will have to face: global warming and other changes in climate, disastrous ups and downs in our interlinked financial markets, worldwide unemployment, more than a billion people living in deprivation, disappearing soils and forests, oppressive governments and corporations, a stratified economic system that rewards the most greedy among us. As we confront the challenge of *repatterning human nature* to succeed in Jump Time, we must ask ourselves: What kind of education do we need to develop the skills to cope with a world in which so much can go wrong?

It would be the greatest of tragedies if now, in the midst of the golden age of brain/mind research, when we are discovering the full range of what we contain and what we yet may be, we agree to limited vision of our possibilities amped up with new technologies. Education that is hands-on, sensory rich, and experience laden, which calls forth the whole mind of the whole child, can develop our human potential and give us the tools to cope with whole system transition. Moreover, schools can lead the way in providing the model for education that is continuous throughout life, so that adults can be and know and discover human wonders that exceed even the most far-out technologies. This is what schools at all levels can teach. In so doing, they prepare us to be possible humans who are equal to the task of navigating the shoals of Jump Time.

Perhaps by looking at an earlier Jump Time and its optimal education, we can discover ways of reinventing our own.

Shakespeare at School

Why is it, I wonder, that as the millennium begins, a film about Shakespeare entrances and engages us, and Shakespeare's plays, written four hundred years ago, are the backbone of local theater groups as well as movies, novels, and Broadway productions? There is mystery here, and magic as well. Perhaps across the centuries, something is calling us to look to the past to discover our future.

Just saying his name, "William Shakespeare," sets us off. He is a whole mythology unto himself and a continuous industry for scholars, teachers, and filmmakers. He looms out of the Jump Time of Elizabethan England with an astonishing abruptness--genius, of course, is always abrupt and unexpected. But this is a man from someplace else. For how on earth and under heaven could such a mind of incomparably greater powers than anything that had gone before (with the possible exception of Leonardo da Vinci) have so mysteriously appeared, if not from someplace else or some great unbounded cavern of the soul that few have ever visited?

Perhaps some answers can be found in his education. Indeed, his education may give us the future of our own, for in its own way, it was prescient of the best things we know about drawing forth

the passion of our minds and the fullness of our spirits. So let us discover Shakespeare as a child. There is Will, up at five, wandering to school through dawn and bird song, “the whining schoolboy, with satchel and shining morning face, creeping like snail, unwillingly to school.” After he has learned his ABC’s out of the hornbooks of the time, it’s on to grammar, to memorizing reams of poetry, hearty maxims, whole books of the Old and New Testament, and the ever-present Latin--Cicero, Cato, Aesop, Horace, Virgil, and the glorious ancient Roman playwrights, Terence, Plautus.

And he acted the plays as well. Richard Jenkins, who was one of his teachers, had been a student of Richard Mulcaster, the headmaster of the Merchant Taylors School. Mulcaster believed that children could learn best if they acted, and he regularly brought his boys to Court to act in plays. Acting, he insisted, would have a good effect on their “bearing and audacity,” for he knew the uniqueness of the time in which he lived: “This period in our time seemeth to me the perfectest period in our English tongue. . . . There is in our tongue great and sufficient stuff for art.”

So little Will was a performer from the start. Theater was the way his mind was formed. In addition to being in plays, he frequently saw them performed; Stratford, as a market town, was visited by most traveling players and mummers. Thus from his earliest impressions Will discovered that “all the world’s a stage.”

Then, too, the world that he lived in, sixteenth and seventeenth-century England, was the most literate society the world had ever known. Fifty percent of men in cities and forty percent in the countryside could read, and women were not that far behind. England seethed with new ideas, and the public participated in debate and learning on every front. The monarchs, particularly Elizabeth and James I, were more involved with scientific and literary as well as classical explorations than any rulers before or since.

Thus it is no surprise that in this period of unprecedented intellectual vitality--a Jump Time not unlike our own--the demanding plays of Shakespeare were popular with a large and wide-ranging audience. His words indeed “split the ears of groundlings,” who would applaud and shout with delight. Shakespeare’s words and uncommon wisdom were birthed in that school in Stratford, a place that was a product of educational reforms suggested by the quintessential German educator and humanist of the early sixteenth century, Desiderius Erasmus.

Humanism was an attitude of the mind that accompanied the flowering of the Renaissance--the *studi humanitas*, those studies of grammar, rhetoric, poetry, history, and moral philosophy thought to possess the ability to make a fully realized human being--a new order of the possible human. Erasmus believed that the mind could be engaged in fresh ways through translations from one language into another. And so a grammar school boy of Shakespeare’s time spent eleven hours, six days a week, for up to ten years, translating from Latin to English and back again, analyzing Latin literature, much of which was based on Greek stories and sources, reading aloud, reciting, memorizing.

It’s no wonder then, that when Shakespeare got to upper school, he fell in love with the great Roman poet of myth and symbol, Ovid. As much as the Bible and the Book of Common Prayer, Ovid fertilized his mind, touching off deep memories of mythic power that gave him some of his finest plots, subjects, characters, and themes.

Elizabethan England was also the all-time place for memorization, often through hearing things

spoken, as books were hard to come by. Shakespeare's aural memory was prodigious. His vocabulary was saturated in the grandeur of words and phrases that one finds in Latin. With so many thousands of poems and word combinations in Latin, Greek, and English roaring through his mind, he borrowed from everybody, and his great speeches are a remade world of submerged and unconscious literary memories and quotations. Shakespearean scholars have waxed fat and foolish trying to trace his indebtedness to sources, but they lose sight of the fact that Elizabethan culture was a great stewpot of language, memory, and literary pyrotechnics. Just as Renaissance Italy was the premier center for visual images, so England became supremely the place for auditory images. It is the nature of images to spawn other images, and auditory images weave and wind sounds together to make for new conjunctions, indeed, for new thought.

Erasmus further counseled that students learn the art of *controversiae*. He advised that students engage in debates, devising arguments, both rational and emotional, to persuade their hearers that first one side and then the other is correct. Debating taught students to argue both sides of a question convincingly. Perhaps this is why Shakespeare's own opinions are never completely clear. He is "myriad-minded" and can so successfully persuade us that several views are equally correct that we cannot find within them any that can be said to speak with his authentic voice. In this Shakespeare is the genius of polyphrenia. He creates his characters as human beings and sets them free of obvious manipulation.

Another formative practice in the training of young scholars in Shakespeare's time was imitation, a writing exercise that is neither slavish reproduction, nor mere translation. One studies a great piece of writing by one of the acknowledged giants of the past, enters into a process of internalization--an alchemizing through one's own life and experience--and then creates a poem or other work which is unique to the writer yet has similarities to the original. This practice enriches one's ways of thinking, deepens one's ability to allude to other forms, thickens the soup of one's mind, and begins to make it possible to play, as Shakespeare and his contemporaries did, a delicious and pleasurable game between literature and life.

Perhaps the most important of the educational demands of Erasmus, and widely used in Shakespeare's day not only by schoolboys and scholars but by gentlemen and courtiers, was the notebook. Divided into sections, with themes and categories, one noted in it everything one read, saw, and heard. We know that Leonardo da Vinci kept copious notebooks, adding visual notations to his ideas and observations. It's as if he were taking notes for God. In our own day, anthropologist Margaret Mead always carried a thick, square red notebook in which she jotted each day things that interested her. She generally filled one of these books each month. Interesting ideas, evocative turns of phrase, emotion-laden scenes, research materials, and her considered reflections on these all ended up in her red notebook. She told me that every night or early in the morning she reviewed the day's observations to keep them fresh and fertile in her mind. The Library of Congress now has many of these red notebooks on file. There is a vast difference between this kind of precise written observation and what we call "journaling."

With so much to draw upon in his inner library as well as his notebooks, Shakespeare experienced an astonishing ease and rapidity of interchange between literary texts and the life of

spontaneous feeling. He was a world-maker, creating a world, populating it, and setting it to spin. He kept his characters in his mind all the time and was aware of what had happened to them before the play began and what was happening to them at each moment within the play, even when they were not on-stage. Thus they continued to develop, even when he was not holding the quill. Perhaps that is why Shakespeare's creations never really die, why Romeo and Juliet, Hamlet and Lear, in spite of their tragic endings, continue to live in the mindfield, where Shakespeare planted them for immortal life.

The Clara Barton School

William Shakespeare is a Jump Time in his own right. He is the soul of his age, the supreme educator, who blends his conscious art with a cornucopia of sources so that his audience and readers respond with all that they are and more than they know. Great teachers do this, and great education--for all its differences in content from that of Shakespeare's day--brings the mind of every child into congruence with its own genius. I have observed many schools and many styles of learning the world over, and the best of them, the ones to which children run in delight and expectation, are those where learning is creation, performing, thinking across subjects, exploring ideas through images, sounds, songs, dances, and artistic expression. There children become, like Shakespeare, "myriad-minded"--conscious participants in their own unfolding. Yes, they continue to read, and write, and cipher, but they are also encouraged to imagine, dream, and expand the limits of the possible.

A strong line of connection links little Will in sixteenth-century Stratford and Willy in twenty-first-century Minnesota. At the exceptional Clara Barton School, the finest characteristics of Shakespeare's education are realized in brilliant contemporary forms, with wonderful results for children, teachers, parents, and community. Looking in depth at this model school gives us a good picture of the best the current educational system has to offer.

Willy does not translate from English to Latin and back, but he *is* transferring what he is learning in math to what he is studying in music--the progression of harmonies made clear in their mathematical arrangement. As we now know, music lessons enhance spatial intelligence--crucial for engineering, computational abilities, and technical design. Willy corresponds via e-mail with Vikram in Madras, who is also showing considerable ability in both math and music, as are many of his classmates, for the ragas which fill the air in India have complex rhythmical and tonal patterns which call forth the geometry's of the mind, the algebra's of consciousness. Willy's school emphasizes music and art, because its teachers know that arts kindle the imagination, stimulate the brain's connectivity, and give students first-hand experience at world-making. As Shakespeare knew, and as the best schools of Jump Time put into practice, the arts make us human.

The more we learn about the ways students learn, the more important arts education becomes. Recent research indicates that less than fifteen percent of students are auditory learners, that is, they process information primarily through hearing it. Visual learners, who process information primarily by seeing pictures, account for forty percent of students. Kinesthetic learners, who respond best to hands-on learning, are the largest group; fully forty-five percent of students need immediate sensory stimulation to learn effectively. Kinesthetic learners often have trouble in traditional verbal-based classrooms, where opportunities for high-touch learning are rare. Arts help visual and kinesthetic learners--in fact, all

students--to learn more quickly, retain what they have learned, and feel more positive about learning.

Recent research shows that if children sing songs, they learn math and languages better. The mental mechanisms that process music are deeply entwined with brain functions such as spatial relations, memory, and language. Give children singing lessons and keyboard instruction and their mathematical abilities soar. At the Northwest School in Seattle, students in grades 6-12 are required to take two arts course at all times. Offerings such as dance, drama, music, and the visual arts are taught by practicing professional artists, who are also strong teachers. Frequent informal performances and exhibits encourage students to feel proud and confident about their work. When nine college admissions directors and independent college counselors were asked to rate local high schools, the Northwest school was ranked second overall among all Washington high schools and highest among private high schools in student achievement during their first year at the University of Washington.

Music instruction even helps students learn science, as is demonstrated by high science achievement scores for eighth and ninth graders in Hungary, which up until recently had the most intensive school music program in the world. Dance energizes and stimulates the entire mind-body system. Another study of 250 elementary students showed that they improved significantly in language arts when movement and dance activities were expanded, test scores rising in correlation to the amount of time spent in movement activities.

Results like these underscore why arts programs are so critical. A child can learn math as a rhythmic dance, and learn it well, for rhythm is processed in the brain in areas adjacent to the centers for pattern and order. A child can learn almost anything if she is dancing, tasting, touching, hearing, seeing, and feeling information. She becomes a passionate learner who delights in using so much more of her mind/brain/body system than conventional schooling generally permits. So much of the failure in schools stems from boredom, which arise from the system's larger failure to stimulate and not repress those wonder areas in a child's brain that give her so many ways of responding to the world.

At the Clara Barton School, Willy's classroom buzzes with rich language. The combustible words of great literature come pouring out of the mouths of students and teachers alike in the "read alouds." Students are inspired to try their hand at writing in the style of the literary greats, identifying the techniques and using them in their own poems, plays, and stories. In third and fourth grade classes, students read and compare versions of the "Cinderella" story from many cultures, identifying common themes, exploring cultural differences, and then writing their own versions. Willy's classmate Marvella discovered that, like Cinderella, Oprah Winfrey was mistreated as a girl by members of her family. Then she looked at the life of Nelson Mandela and saw in his childhood an African Cinderella story. Finally, she wrote her own version, set in an urban ghetto. Mirroring techniques are also used in the visual arts. Children are encouraged to use the line drawings of Picasso, Durer, and Degas as stylistic models for their own sketches. Imitation of art enhances fine hand to eye coordination and gives children extended powers of observation, a skill needed in many sciences.

Currents of theater and drama flow through all levels of the curriculum at Clara Barton. Children in the primary grades act out stories and poems in order to interpret them and practice social behaviors by dramatizing a full range of social conduct, from the comically disastrous to the elegant and courtly. By the fourth grade, theater games are a constant, and history class is frequently enriched

with reenactments of the signing of the Declaration of Independence or the delivery in character of great speeches of the past. Students of all ages take part in theatrical events, putting on everything from *Guys and Dolls* to Shakespeare to their own plays, including an original musical, “Science, So What?” The school is also a veritable Stratford in that traveling troops of players regularly perform for the students. In a recent month, students were treated to a one-person show about Jackie Robinson, a new play weaving a Japanese tale with issues of Asian adoption in Minnesota, and the famous puppet theater “Bread and Roses.” The school’s annual fund-raiser is also a full-dress theatrical occasion at the local weekend Renaissance Fair. Parents as well as students are caught up in the spirit of the re-creation, and many come to school in full Renaissance dress, acting the parts of artisans, merchants, and noblemen and women, telling stories, teaching crafts, and enacting thrilling duels.

I am a passionate advocate for the use of theater in the classroom. In theater, the child becomes the possible human, using all skills--music, dance, rhetoric, expression, feeling--to tour the landscape of human experience. If all the world’s a stage, then all stages of life, all grades of human aspiration, all levels and layers of human expression and emotion are scaled when drama comes to school. Walt Whitman once said, “I become what I behold.” Childhood is that special time when the margins of the self are leaky. Theater allows children to try on the many parts of the human comedy and the full range of human knowing. What is more, what one enacts, one remembers.

Debate is also high on the academic agenda at Clara Barton. Children in the middle grades practice a contemporary form of *controversiae* and are provided with many opportunities to see all sides of an issue, speak with different voices, and express opposing views. Recent debate topics in Willy’s science class span the spectrum of challenging and charged contemporary issues: the ethics of cloning, surrogate parents, the use of fetal tissue in research, organ transplants. Recently, Willy’s history class debated whether the US government or an international UN force should try to capture and kill Saddam Hussein. In the midst of an emotionally laden debate, Willy’s teacher often asks students to switch sides and argue the opposing point of view.

Words on the page are stimulated by the brain in motion. Metaphors are the stuff of the brain’s transformings. Take time to observe an approaching fog, and it becomes, as in Carl Sandburg’s vision, a creeping cat. Dancing to Saint-Saen’s *Carnival of the Animals* translates into rollicking images of how it feels to be large and lumbering, furred or fanged. The rough texture of tree bark branches in the mind to poems that root in earth and reach to touch the sky. But even more, the mind grows a network of images and ideas and charges these with the chemistry of creation, and what was seen, heard, imagined is then is planted on pages redolent with discovery. The child writes and rarely fears to write again.

Starting very early, children at Clara Barton learn to savor personal writing. Like Leonardo da Vinci, their journal notebooks have sections for writing, drawing, and deeper reflections. Life becomes an opportunity for making a record of day-to-day happenings. A second-grader came bursting into her classroom one morning in great excitement. “My friend broke her arm, and I have to write about it in my journal,” she exclaimed. In Launa Ellison’s fourth grade classroom, Kyle creates in his journal a continuing cartoon strip with original characters, Kaelyn writes a unfolding story with weekly episodes, while Steffanie is pouring out poetry.

Though the Clara Barton School takes part in district and state required tests, few teachers use

exams as part of the classroom learning process. Instead, students in every grade keep two portfolios, a yearly collection of work and a pass-along collection that follows them from grade to grade. Younger students like Willy come with their parents to lively Portfolio Parties, where students are encouraged to present their work to their parents. In preparation for the event, students choose a sample from the art, math, science, and writing sections of their portfolios for posting on a “best work” bulletin board. By the seventh grade, students share their portfolios in high energy performance evenings, filled with joy and laughter, discussion and creativity, that allow students both to demonstrate and to reflect on how much they have learned. Each May, children and teachers from kindergarten to the upper grades choose three to five works from the year’s collection to place into the students’ pass-along portfolio, which provides continuing evidence of the changes they have made. When Willy graduates from the eighth grade, his parents will be presented with this cumulative portfolio as part of the closing ritual of his years at Clara Barton.

New Skills for a New World

The kinds of learning experiences offered at the Clara Barton school and institutions like it would be wonderful if widely applied, not just in North America, but in schools all over the world. They represent the best of we know about education for the twentieth century. Unfortunately, much of our educational system falls woefully short of this high standard. All children need windows of opportunity that will open them to a world which they will partner in new creation. Never has the time been so ripe for change and never before has education been more available to new strategies. So much is now known about the nature of learning that, if applied broadly, could potentially transform civilization and create, within several generations, people who are endowed with the skills and moral courage to navigate in Jump Time.

Neuroanatomist Marian Diamond at the University of California at Berkeley has shown that the human brain can change structurally and functionally as a result of learning and experience--for better or for worse. When we are in environments that are positive, stimulating, and encouraging of action and interaction, the human brain continues to develop throughout our lifetime, growing new neural connections that enhance our capacities for learning, creativity, and problem-solving. In effect, we make our brain as we use it.

In the Jump Time of the new millennium, we must use what we know to educate ourselves for the next civilization, the one that exceeds our expectations. In a sense, what is needed is training for the unknown and inexplicable. We must discover ways to “cook on more burners” and to democratize skills which in past belonged to the few. This challenge takes schools into areas of human potential that assume as a given the education of the whole mind and body that occurs in forward-looking schools like Clara Barton. It also spurs them to embrace capacities and sensibilities that traditionally belong to mystics and mages, high creative folk and world servers.

The goal of this kind of education is what I have called “the possible human,” the fetus of the emerging self. Perhaps this full expression of human potential has been coded in us since time out of mind, but only now, given present complexity and crisis, have so many been called to its realization. What skills this possible human can evince, what use of the tremendous palette of our given but

forgotten nature it implies, may be key to our stewardship of the Earth and to our continuity as a species, as well as to our future as star-goers, explorers, and creators in a universe both real and visionary. Let us look at some of the skills we might need to grow the possible human:

Body Skills. The first group of skills is engendered through an emphasis on dance, sports, and physical training, giving children an enjoyable experience of being in their bodies, flexible joints and muscles, and a physicality that is fluid and full of grace. A fine tuning of body senses and physical abilities assures a greater appetite for delight and for the pleasures of being human—the sheer enjoyment of being corporeal.

The stimulation of a multisensory education gives children acute senses, which are not limited to five, for they enjoy and maintain a state natural to most children--synesthesia or cross-sensing, the capacity to hear color and touch the textures of music, capture with their noses the smell of words, and taste the subtlest of feelings. Since their sensory palette is so colorful and wide ranging, if encouraged, children can begin the journey toward engaging the world as artist and mystic, seeing infinity in a grain of sand and heaven in a wildflower. This perceptual style can blossom into a capacity to recognize the patterns that connect the forms of life and thought to each other. It grants an acuity of observation that gives meaning to randomness and the ability to see emergent order where to all appearances only chaos resides.

The splendor of their sensory life graces children with an accompanying gift, an excellent memory, for so present are they to the perceptual richness of everyday life that little is lost or disregarded, and all is stored in their memory banks for later review and delectation. They also can learn to become time players, able to speed up subjective time when they need it to go faster, or slow it down so as to savor lovely moments or have more time to rehearse skills or review projects.

Should their natural zippiness and boundless curiosity entice them into situations where they are physically hurt, children can be trained through bio-feedback to control any bleeding and even to accelerate their own healing. We now enjoy a wealth of recovered knowledge of indigenous healing procedures; because they are innocent enough to accept them, children are naturals to learn these skills.

Moreover, like the yogi adepts in the Himalayas, children have the capacity to learn to voluntarily control involuntary physical processes--self-regulating skin temperature, blood flow, heart and pulse rate, gastric secretions, and brain waves. Indeed, they can learn to enter consciously into *alpha* and *theta* brain wave states for meditation and creative reverie, drop into *delta* whenever they want to go to sleep, and call upon *beta* waves when they need to be alert and active. Scanning their body, they can self-correct any system whose function is less than optimal. In fact they can access the “optimal template” of their own physical pattern, and learn to use this “wisdom of the body” for further self-correction and improvement.

As they develop appreciation and respect for their own bodies, children gain regard for the bodies of others as well. The moral consequences of this connection can be enormous: people are no longer seen to be abstractions or statistics, but partake of an embodied glory that makes killing or violence unthinkable.

Consciousness Training. A Jump Time education would also require that children learn to self-orchestrate along the continuum of states of consciousness, traveling interior highways through realms of fantasy and imagination, spelunking through caves of creativity. We have discovered that consciousness has many states, apart from that half-awake state we call “normal waking consciousness.” Some states are hyper-alert, allowing one acute focus and concentration. Others grant access to states of high creativity. And then there are those states in which the personal self seems to disappear, and one enters mind at large—a unitive condition in which one discovers oneself to be the knower, the knowledge, and the known.

An arts-based education greatly facilitates the capacity to travel in inner space. Drama, music, and the potent richness of language teach children to think in inward imageries and to experience subjective realities as strikingly real. They become explorers in the vast reservoir of virtual realities without any machine to assist them. They discover with delight that self-creating works of art are always budding out of the fields of their minds and that they can capture and rework them as they wish. In essence, they are discovering one of the main secrets of being human: that we contain within us many cultures, many worlds.

Education in the Appropriate Use of Technology. Education these days goes hand in glove with technology. The challenge is to teach children to control the machines and not the other way around. So seductive is the new technology, so expert and computer literate are many children, that the computer is fast becoming an extension of their bodies. There they are, little proto-cyborgs, manipulating electrons before they can parse a sentence. Information is out there, a disembodied “fix” to be downloaded without much struggle by little post-humans with flying hands and screen-lit faces. Math is a matter of hitting buttons on the calculator, and art is moving preset graphics into place. The juicy world filled with the blood music of its people and their passions risks becoming an abstraction to be viewed from a space more suitable to the gods of Olympus than the life of an eleven-year-old. Like the mouse that eventually dies from pushing the pleasure button and forgetting to eat, the only life some children lead is on the screen. Thankfully, these children are still in the minority, but not for long. The revolution in high tech expectation is forcing the hand of school boards everywhere, and computers in every classroom are becoming as ubiquitous as the proverbial chicken in every pot.

As much as I love computers and the technological utopia they portend, I for one am not interested in marrying my humanity to a machine. Many have suggested that in the years before 2050 we may have automatons that are conscious and self-aware. Marvin Minsky, MIT computer scientist, believes that the next stage of human evolution will be the merger of humans with electronics. If he’s right, our descendants might be able to transfer memories, thought patterns, even personalities clump by clump to neural nets contained within the electron circuits of a robot. An entire consciousness transferred, and the myth of the Golem is realized in a body of silicon and steel. That is why I believe that Jump Time holds the key to our future humanity: Do we become post-humans or deeply realized humans?

What schools can do to influence the outcome is increase children’s experiences of high touch to balance the seductions of high tech. A high touch education—holistic, integrated, arts-centered—calls

forth the natural splendor inherent in every child's mind and body. Human beings contain far more images, ideas, stories, information, feelings, and, of course, consciousness than any computer. In a sense, we humans are meta-computers with the entire cosmos as our hard drive and our body-minds the screen for its unfolding. Western dualism that has split mind from body, body from nature, and self from universe has tended to increase the chasm between what we think we are and what we really are. Thus, our dependence on machines for our reality. Thus, too, the importance of high touch education to bridge the great divide and bring us home to the universe that resides within.

Properly balanced by high touch, computers can, without question, be adjuncts to self-discovery and exploration of the many worlds in which we live. Technology democratizes information and encourages the growth of noninstitutional, ever-shifting networks of self-organizing learners. Computers free students from the constraints of linear, word-based reports and allow them to express their understanding of a subject through multimedia creations, incorporating a rich composition of visual and auditory devices and providing pathways and links to other knowledge resources on the World Wide Web.

Schools can modulate technophilia by teaching children to use computers to enhance their experiences of reality rather than to substitute for it. A few snapshots from the frontier: A thirteen-year-old with cerebral palsy uses a computer to help track weather patterns and shares the results with meteorologists all over the world. Astronauts on the space shuttle and explorers in the rain forests of Peru relay the excitement of their discoveries as they happen to students all over the world via the Internet. Students at an Omaha school use the Internet to identify countries that are violating human rights, create multimedia projects, and send them to governments with pleas for reform. At Vermont's Cabot School, kindergartners through high school students take part in a School Report Night to which the entire community is invited. At one display, visitors click a mouse to view multimedia stories written and illustrated by primary students. At another, they watch a riveting documentary about the internment of Japanese-Americans at Manzanar Internment Camp created by a ninth-grader whose grandfather was among those imprisoned at the camp.

The humane use of human beings demands that embodiment be central to all educational experience, and that artificial intelligence, however fascinating, be our servant and not our surrogate.

Ethics and Values Education. Training in ethics and values is a road to freedom for, as Benjamin Franklin wrote, "only a virtuous people are capable of freedom." Theodore Roosevelt concurred, claiming that, "educating a person in mind but not in morals is to educate a menace to society." How we plant and tend a child's garden of virtues will have consequences for the future of the family, society, and the planet herself. For in these days, the garden comes preequipped with a very naughty snake who offers the fruit of many temptations and not a few paths to singular perditions. Adam and Eve had simple choices compared to the tangled undergrowth of our children's moral options.

It is a truism that moral education begins with creating a caring community within the classroom. A warm and supportive teacher-child relationship makes all the difference in the emotional climate of the classroom as well as in the cognitive development of the child. We all have memories of Mrs. Toad-Faced Horror who had us shaking in our shoes and peeing in our pants in expectation of chastisements

that left us stupid and stunted. The chemistry of fear is one of the best ways to block the development of both heart and mind.

One well-known stratagem for creating a positive climate is encouraging children to discuss “the way we want our class to be,” which opens into an exploration of the principles of fairness and kindness that make this goal achievable. Children themselves develop class rules that support these principles and are responsible for seeing that they function well. However, in Jump Time, more is required. Children can move from this discussion to a consideration of “the way we want our world to be.” Classrooms can model a civilized society--a community of responsible, moral people who have zero tolerance for racism, sexism, violence, and psychological abuse. Cooperative learning, as when third-graders help first-graders with their reading, also encourages responsibility and consideration for others.

Enriched by a high touch education, children are better equipped to appreciate values and make moral decisions. Being more, they come to feel and care more deeply about decay and degradation in the world around them. Storytelling drawn from folktale, literature, history, and biography is an important part of this training in moral wisdom. Children should be encouraged to dramatize traditional stories and to make up new ones that celebrate virtues. The enactment of an ideal is always one of the best ways to make it second nature. Storytelling can also help children develop an inner voice of conscience, one that can and will speak up for worthy behavior.

Another critical component in ethics training is understanding the consequences of actions, even establishing a Department of Consequences within the classroom. Here children can discuss and enact the short and long-term results of behaviors they experience. Teaching children to understand how their behavior impacts the well-being of others encourages empathy and the development of “leaky margins” to others. In Jump Time this sense can easily be expanded to a feeling of kinship, not only with other children, but with all creatures and forms of Earth life. Older children can be provided with opportunities for social artistry--youth parliaments, for example, which establish the context and the training for future leaders. Parliament members can be observers and even participants in local and national governments.

Finally, we might consider as a radical Jump Time antidote to bored and disillusioned youth the alternative of some children finishing high school by age fourteen or fifteen. The next two or three years would be spent in service activities, a kind of youth corps devoted to cleaning up inner city neighborhoods, helping out in hospitals and convalescent homes, improving parks and recreation areas, and coaching and mentoring younger children. Such training in active compassion could give young people hands-on experience of the world. It could also be an extended rite of passage, a transition from childhood into adulthood, which channels the energies and idealism of adolescence into activities that enhance moral development rather than prolonging a period in which too many young people find themselves in a rootless limbo. Deepened by experience and practical wisdom, seventeen and eighteen-year-olds can go into jobs or on to higher education, bringing with them a breadth and depth of experiential learning.

Teaching-Learning Communities

Children aren't the only ones who need new skills for coping with Jump Time. Adult minds and spirits are stretched when we reacquaint ourselves with childlike perceptions and enthusiasm for

learning. If we could experience in a decade of adulthood something approaching the mental growth that we make between the ages of three and thirteen, just think of how expanded our minds and spirits would be, how enlarged our perspectives, how wide and deep our knowings, how compassionate and searching our understandings! It is we adults, after all, and not our children who have savaged the world and perpetuated the malaise of war and wasteland. It is we adults and not our children who fail to participate sufficiently in the music of our minds to orchestrate the challenge of change of our Jump Time world. And it is we adults and not our children who through ignorance and narrow-mindedness bring technically complex short-term solutions to bear on many-layered social and economic problems and, so, fail repeatedly. Bridging the genius childhood and its gift for learning with our adult responsibilities may save our planet. Becoming life-long learners may be the key to our continuance as a species. Granted there are many fine adult education courses and seminars, but so great is the need that something more is required.

Part of my work has been helping to create teaching-learning communities around the world. This has not been difficult, as movements currently exist in many countries to establish councils or circles for people to meet regularly and share their life experiences, their dreams, their processes of self-discovery, and their attempts to make a better society. A recent study funded by the Gallup Foundation indicates that 40 percent of adult Americans are regular members of small voluntary groups which explore personal and social development. Among these are various support groups, religious study groups, dialogue groups, psychotherapy groups, twelve-step groups, consciousness-raising circles, men's and women's groups, garden clubs, salons, ritual groups, and all the Moose, Elk, and their ilk. Sociologist Paul Ray made a further study showing that some 24% or 44 million adults in the United States are part of a community which he terms the "cultural creatives," whose members constitute a rising "integral culture" with values based on personal development, spiritual transformation, ecological sustainability, social activism, and the honoring of the feminine. My experience of similar groups in Europe, Australia, and parts of South America and Asia suggests that this integral culture extends far beyond the borders of the United States. Taken together, what we might term the wisdom circle movement and the integral culture represent a significant manifestation of a unique and very necessary phenomena: the spread of non-institutional growth communities devoted to developing human potential to raise to address the enormity of the earth problems. It would seem that our present Jump Time has loosed a movement in consciousness and community to bring people up to speed so that they become practitioners of the possible in an era of vast transition and social upheaval.

As I see them, teaching-learning communities must focus on a form of cocreative education in which participants meet regularly to stimulate, support, and evoke each other's highest sensory and physical, psychological, mythic, and symbolic and spiritual capacities. Groups may be made up of family, friends, colleagues, employees, students, clients, parishioners, neighbors, mothers, and so forth. Ideally, members include only those who freely choose to participate and who feel strongly motivated to do so. Groups can be as small as five and no larger than twenty-five. Generally, such communities are most open for growth when they are without a regular leader, the function of guide or facilitator rotating among the members.

Working in groups helps eradicate one of the worst ills that afflicts *homo sapiens*: the tyranny

of the dominant perception. Having companions helps us to see that different beliefs and perspectives are enriching. As we recognize the enormous variety in ourselves and others, we stand in awe before the sheer abundance of human creativity, renewing our dedication to increasing the amplitude of body, mind, and spirit of each member of the community. Practicing growth processes in teaching-learning communities also helps us bypass another insidious human failing, the potential for sloth. Self-discipline and good intentions have a way of evaporating without some consistent external commitment.

Jump Time is the most critical time in Earth's history. Never has the ultimatum "grow or die" been a greater imperative. I believe that working in groups creates transformational synergy, that we can travel faster and deeper together than we can travel on our own. Through the evocation of one another, we expand the base of our concern, developing an enhanced relationship to our planet and intensifying our recognition of its needs as well as our willingness to respond creatively to those needs. Working in community, each person holds the dreams and excellence of everyone else in the group, so that should we descend into a period of depression or despair, our excellence and dreams are held by the group until we return to a healthier mindset. And if we can do this for each other, we can hold as well our collective dream for the world's future. Thus, in working with a group, we should try to involve people who, in their faith in the future of humanity and the planet, are willing to work together with constancy and caring to develop and extend the presence of the sacred in daily life.

Most of the books I have written are designed with these kinds of groups in mind, providing experiential journeys into powerful adventures of the soul that are at once both universal and intensely personal. When we work with a great adventure like the Search for the Grail, with a mythic figure like Odysseus, or with an historical personage whose actions through time and legend have been rendered mythic like Gandhi or Cleopatra, we see the experience of our own life reflected and ennobled within the story of that great life and join our personal themes with those of universal reality. In stories of love and loss, death and rebirth, revenge and reconciliation, we meet ourselves writ large and gain a cache of experience which empowers us to act in the world in noble and creative ways. We engage together in processes inspired by these lives and legends and use state-of-the-art techniques to increase our sensory, psychological, and spiritual capacities. In so doing we gain something of the mental agility of Odysseus, the perceptual acuity of Emily Dickinson, the storying mind of Shakespeare, the spiritual exuberance of Hildegard of Bingen. Like Shakespeare and company we become participants, actors, and playwrights in profound stories of growth, challenge, wounding, and transformation, thereby creating the conditions and impetus we need for extraordinary personal and communal growth.

I think Will would be pleased by our new adventures in education for young and old. He might even write a sonnet.