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EINSTEIN AND ZEN:

LEARNING TO LEARN

Conrad P. Pritscher

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## PREFACE

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What made Einstein such a brilliant Being? Are there ways that we can approach Einstein's brilliance? What are the implications of Einstein's thought for schools and society? What is the connection between Einstein and Zen and what can that mean for the rest of us? In this hopeful book Pritscher brilliantly gives us insights to help all of us approach the wisdom we have come to define as Einstein. Through what he calls Einsteinian mind openers, Pritscher shares with us what we can all do to strive to be like Einstein. The insights are a great and exciting gift for all of us who take the time to read this inspiring and life altering book. For this reason, this book is for educators but even more correct would be to say that this book is for everyone and anyone who wants to strive to be like Einstein or to help others understand how they too can strive to be like what has become synonymous with wisdom and genius: Einstein. In a more holistic sense this book is about more than mind but also about empathy, compassion and kindness and so much more. Ultimately, the book offers all of us a better way to live by using Einstein and Zen as models of hope that we can and should all aspire towards. Why should we aspire towards this? Because, "The community, to Einstein, is more important than the individual. It is posited that this benefit of the community rather than the individual is at the heart of "kind compassionate thought." And so, who would dare argue against a kinder, more compassionate world?

When Pritscher first asked me if I would be willing to write the preface I was thrilled to be asked and even more thrilled that Pritscher wrote another book about Einstein and education. As I was thinking about how to approach this I started to read the book and highlight the passages that resonated with me. After reading the first page it was clear that this method would not serve. As I stood back and looked at my computer screen it was all highlighted yellow. This is a testament to the richness in every thought in this book. This is a book that needs to be read and then reread over and over to ponder and truly contemplate the remarkable implications of what is being said. For example, How wonderful and how different would the world be if only this thought were taken seriously: “When students are free they study what is remarkable, interesting, and important for them.” For me, in part, this line opens up the possibilities of non-oppressive spaces for young people where they are all free to explore what they value and are passionate about. The result is that young people can truly unfold their inner genius—all this richness from just the first few lines of the text.

One substantive issue that gets explored and really resonates with me is how do we open our minds? With respect to schooling the question becomes how do we move from a schooling system that believes in an artificially contrived system that plans opportunities for discovery learning, to an educational system that truly implements open inquiry. I see this as a move beyond a progressive model to one that approaches a more learner centered model where students get to decide what, when, how and when they want to learn—a democratic system where students are truly empowered. One way to think about this difference between a progressive Deweyian model and one that moves beyond that is to focus on what Holt (1999) wrote,

Almost a century later John Dewey was to talk about “learning by doing.” The way for students to learn (for example) how pottery is made is not to read about it in a book but to make pots. Well, OK, no doubt about its being better. But making pots just to learn how it is done still doesn’t seem to me anywhere near as good as making pots (and learning from it) because *someone needs pots*. The incentive to learn how to do good work, and to do it, is surely much greater when you know that the work has to be done, that it is going to be of real use to someone. (p. 121)

This difference between Holt and Dewey as pointed out by Holt makes it clear to me that Holt’s authentic and genuine need to make pots results in greater control, freedom and benefit to the community at large which is, in part, what Pritscher is getting us to think about. As well, as Pritscher correctly points out, “There is a different quality to the inquiry concerning a topic or question if the inquiry is assigned by the teacher rather than a question or discrepancy chosen by the learner.”

This book gets us to rethink a lot of things including schooling. We need a revolution in schooling whereby schools go from being merely places where individuals get trained to places where schools become centers of education. We need to take seriously the notion of the plasticity of the mind and that there is no critical period for learning; in fact, the best time to learn anything is not when some external agent decides it is best for someone to learn it, but the best time to learn anything is when the individual hungers for that knowledge. Take for example reading. Schools believe that children need to learn to read early and the earlier the better. My research around reading finds that there are other ways. For example, free schools and unschoolers or natural learners do not teach reading and so children do not learn to read at standard times. The result, they all learn to read when they are ready and they enjoy reading because reading is

something they have decided to do and not something that has been imposed on them by force. On this point Gatto (2003) writes about students at the Sudbury Valley free school,

In thirty years of operation, Sudbury Valley has never had a single kid who didn't learn to read...So Sudbury doesn't even teach reading yet all its kids learn to read and even like reading. What could be going on there that we don't understand? (p. 58)

There are as many ways to learn to read as there are people learning to read and as soon as a standard formula or definition of how to learn to read gets imposed then those who struggle within that definition are disadvantaged and even worse, labeled as having deficits that belong to them when in reality the deficits belong to the definition. As well, reading is not limited to a canon, but all reading is reading. Furthermore, there is already technology that favors speech and listening to writing and reading and who knows in the near future historians may be talking about tools that people called pens that they used to write on paper and then they were replaced by computer screens and keyboards and who knows what else. They will tell their young that books on devices that read them to us and computers that write what we speak are relatively new in our history—what I have related is not fiction but current reality in its infancy; namely, there are devices that reads aloud to us whatever is on its screen and writes whatever is spoken to it. In a personal experiment I have converted my laptop to do just this and was amazed at the results and simplicity of it all. My point is that what we take as so fundamental and unchallenging in our own time may be replaced in another resulting in a whole different set of skills and groups of people being valued and by extension devalued. To combat this we need to heed Pritscher's words and ensure that kindness, compassion and love reign which would result in everyone being valued and cared for.

In conclusion, Pritscher writes, “If one notices one is primarily ‘trained,’ that awareness can be an enormous step in one’s becoming educated.” This book helps us move beyond a training system and into a system where we can become educated.

Gatto, J.T. (2003). *The underground history of American education: An intimate investigation into the prison of modern schooling* (Rev. ed.). Oxford, New York: Oxford Village Press.

Holt, J. (1999). *Growing without schooling: A record of a grassroots movement—Volume one August 1977-December 1979 GWS #1-12*. Cambridge, MA: Holt Associates Inc..

## INTRODUCTION

Einstein said much. Zen says little but embraces everything. Einstein was a pioneer in attempting to move beyond debilitating modern methods of instruction to the point of granting students high degrees of freedom. Zen practice develops freedom.

Einstein and Zen, by paying attention to structured disadvantage and functional discontinuity in a freer atmosphere, focus on attention to present experience and the other uncommon ways of being. Einstein/Zen ways extend school practice beyond what is now considered.

The genius of Einstein and Zen extends the definitions of intelligence and genius to almost unfathomably open dimensions. A way of looking at learning is Einstein/Zen looking (not what they found, but just looking). It is what constitutes learning to learn, here and now, as we may see. How this power may be used for learning and democratic living is explored. Judgment, self-direction, consciousness, and mind opening are given little attention by researchers who wish to quantify most events. Zen offers ways of accepting non-quantifiable events as they are, as well as ways of extending mindfulness to bring powerful learning, harmony, openness, and peace to all.

Reports by David Geoffrey Smith, Naomi Klein and Jeremy Scahill give evidence of a country-wide gross lack of noticing (an absence of aware judgment). The lack of aware judgment permitted a conservative governmental-industrial complex to control much of what occurs in the USA. This is not evidence of a conspiracy but of an aware judgment deficit. This deficit could not occur without the complicity of our schools and universities. The

governmental-industrial-complex includes schools and universities who train people to be excessively obedient to authority, and to refrain from noticing each citizen's ability to decide for one's self. Groups like Blackwater and Halliburton, are evidence of a privatizing of much for the enrichment of the rich.

About the former conservative governmental-industrial-complex of 2002-2008, David Geoffrey Smith (*Trying to Teach in a Season of Great Untruth*, Sense Publishers, 2006) said: "The largest 300 multinational corporations control 25% of all the world's productive assets, 70% of all international trade, and 99% of all direct foreign investment (see Clarke, 1997, chapter 2). The loyalty of these huge firms is less to the country of their national origin than to new virtual communities of international stockholders. The result is a diminishment of the tax bases that national governments are able to wrest from commercial ventures, which in turn affects the quality of social programs that local communities can offer citizens." (Einstein might say that Smith's reporting is evidence of citizens not noticing and not deciding for themselves.)

Support for spending time for present observation is given in *The Mind And The Brain*, Jeffrey M. Schwartz, and Sharon Begley in *Train Your Mind, Change Your Brain* by Begley. They say: "Through mindfulness you can stand outside your own mind as if you are watching what is happening to another person rather than experiencing it herself....Mindfulness requires direct willful effort, and the ability to force those practicing it to observe their sensations and thoughts with a calm clarity of an external witness....One views his thoughts, feelings, and expectations much as a scientist views experimental data - - that is, as a natural phenomena to be noted, investigated, reflected on and learned from. Viewing one's own inner experience as data allows (one) to become, in essence, his own experimental subject."

Schwartz and Begley noted that William James did this kind of noticing and he used it to help people learn. James helped them learn “hows”. Begley and Schwartz offer new findings in brain research to support this type of learning for self-direction/education.

Brain research is rapidly outpacing teacher’s and professor’s awareness of what brains and minds can do. Begley, *Newsweek* Science Editor, reports on Steven Pinker’s research: “Many human genes are changing more quickly than anyone imagined. If things that affect brain function and therefore behavior also evolve quickly, then we do not have stoneage brains that evolutionary psychologists oppose... (then we) may have to reconsider the simplifying assumption that biological evolution was pretty much over 50,000 years ago.” This writing may help students, parents, teachers and professors become aware of new possibilities relating to learning “hows” without neglecting learning “thats.” Begley also reports stem cells have created neurons. The implications of such creation are far reaching.

The March, 2009, *Scientific American* said: “Fresh neurons arise in the adult brain every day. But new research suggests that unless they are properly challenged with the right kinds of complex learning tasks, they perish.” Schools frequently require the lowest levels of cognitive functioning because they are the easiest to measure. The analysis, synthesis, and evaluation levels of cognitive functioning are infrequently given attention by schools and universities. Einsteinian mind opening promotes the higher levels of brain functioning. Zen goes beyond that.

Philosophers divide knowledge into knowing “that,” and knowing “how.” One knows one can ride a bicycle (a that) which conforms to foundational ideas in philosophy that would be acceptable to Immanuel Kant, Rene Descartes and many philosophers. Knowing how to ride a bicycle is much more difficult to communicate than that one rides a bicycle. As a result,

schools and universities generally tend to not deal with knowing “how” a practice is done, but rather they deal with knowing “that” defined practices are done. The definitions of “thats” are often fixed and true for all times and places. Now is an ideal time to shift awareness to previously neglected “hows” so that training is more often replaced by educating (developing judgment, self direction, and practical wisdom).

When Einstein states education is that which helps one think something that can't be learned from textbooks, he is relating to the “how” of the practice of educating. When a Zen master says the way that can be said is not the way, she would be alluding to “how” the way (to powerfully learn and live) in an intelligent, peaceful, harmonious way is practiced. That peaceful, harmonious way is very difficult to define and communicate, but new brain research opens possibilities not previously considered.

Students barely notice when they are overly restrained. When students are free, they study what is remarkable, interesting, and important for them. More freedom allows students to improve their judgment and practical wisdom. Judgment and learning to learn include learning “how” as well as the more common learning “that.” Einstein knew the modern methods of instruction often treat knowledge of “thats” as fixities (dead ideas) which, as William Pinar states, are like “delivering other people’s mail.”

There are many good teachers and some truly excellent ones. The problems mentioned deal more with the mindset of our system of education which includes narrow excessive unexamined, coercive elements.

This writing deals more with the “how” to educate than clearly defined practices (thats) which may be read and easily applied by teachers in classrooms “tomorrow.” For a detailed explanation of these different kinds of knowledge I refer you to Todd May, *Our Practices*

*Ourselves: Or, What It Means To Be Human*, Pennsylvania State University Press, 2001. May holds the Lemon-Calhoun Chair of Philosophy, Clemson University.

As I make a distinction between training and education, note that training can be more easily described, defined, and explained (a “that”). Educating teachers and professors relates more to how to become an open teacher who provides conditions for greater student awareness, openness, self-direction, and development of judgment.

Schools have excessively trained at the expense of educating (disseminating too many “thats” while helping students learn too few “hows”). Learning to learn deals more with knowing “how.” We need to know many “thats” yet May makes a case for knowing “thats” arise from knowing “how.” Schools and universities have neglected developing learning to learn; a life-long task.

If teachers and professors were to examine how the “thats” they teach relate to “how” to live openly in an aware and self directing manner, their students would learn many “thats” as well as many crucial “hows.” Einstein and Zen move toward helping one learn “how” to pull meaning from experience as the highest, and most worthy form of knowing. Such learning is the equivalent of learning to improve judgment and practical wisdom. Learning how to powerfully learn may be the mental equivalent of a nuclear chain reaction.

May alludes to the notion that we have our practices embedded in our knowledge, our values, and our daily lives so that our practices are reflections of the aware values and self directing knowledge we hold. Einstein and many Zen practitioners do that. The “that” is having their lives be a reflection of what they value and know. Their valuing and knowing is similar to an Einsteinian/Zen “knowing how.”

Part of what follows may help illuminate and accelerate the practices of Einsteinian learning and empathic, less competitive, Zen type social behavior. Some knowing “hows” from Einsteinian/Zen practice can help accelerate the development of “how” to improve judgment and wisdom.

“Hows” often deal with insight/aha!s. Does brain research include intellectualizing? This writing will intellectualize about excessive intellectualizing which may prevent noticing. Some recent brain research by Jonah Lehrer concluded that a person scored well in a measure of insight (measured by a CRA test-using fMRI and EEG). The high scorer was involved with strong focus on present experience generating much insight/many “hows.”

Delivery by teachers and professors of what others think is important (often a series of disconnected “thats”) does not require great skill. Lower level thinking on the part of teachers, professors, and students is what is semi-consciously asked from the conservative governmental-industrial-complex (look for this to change somewhat with President Obama). When teachers and students are less thoughtful, they demonstrate less awareness of broad contexts. With un-honed judgment and minimum awareness of citizens, the conservative governmental-industrial-complex has fewer problems in maintaining power.

Skilled, inquisitive teachers and professors can hone student awareness and judgment through providing conditions of freedom, open inquiry, and self direction for students to learn “hows.” One condition for increased student awareness is a less coercive school atmosphere. Open, inquisitive teachers often view education as Einstein did.

Since school time is limited, time for the implementation of the following suggestions will be taken from common “training” activities (relating to “that’s”). “Educational” time could

more profitably be given to students to observe what is happening as it is happening (so aware judgment may be self developed).

Einstein/Zen learning more directly involves “learning to learn” (more like a “how” than a “that”). When one learns to learn, he or she often learns far beyond what schools now offer. Schooling has devolved from education to training partly because of the lack of clear acceptance of the more difficult to define “hows.” While “thats” are often very important, teachers, professors and school administrators often remain unaware that isolated “thats” are frequently trivial whereas “hows” are often at the heart of powerful learning and living. For now, remaking America is also a school and university task. Remaking needs “hows.”

Suggestions for a longer school day or a longer school year may be detrimental if the excessive focus on training is not changed to “education.” I concur with the idea that much of present day schooling approaches mind-murdering (too many “that’s” and too few “hows” killing inquisitiveness). Extending the school day or school year would then simply murder minds more quickly unless there is a shift to noticing one’s present experience, more openness, and more freedom for students to study what is remarkable, interesting, and important for them.

Joe Kincheloe, Shirley Steinberg, and Deborah Tippins, *The Stigma of Genius: Einstein, Consciousness and Education*, offer many ideas and elaborate on the groundwork for pursuing school change. They reveal many of the problems of modern education and offer solutions. This writing advances their thoughts, providing new ideas and conditions to reduce the influence of the Newtonian-Cartesian framework to a more Einsteinian, free, open, less manipulative, more mindful framework. As Einstein said: “Is it any wonder that the modern

methods of instruction have not entirely strangled the holy curiosity of inquiry, for this delicate little plant, besides stimulation, stands mainly in need of freedom.”

Lip service is often given to extending decision-making to teachers. Kinchloe, Steinberg, and Tippins, report one teacher’s roll in decision making was for the teacher to decide between blue or purple as a color for the teacher’s lounge. Most of us have gone through our nation’s schools and as a result of our training, we continue to accept ineffective attempts to bring about needed change. Most of us have been trained to think an individual can do little to change schools.

Begley states: “It took awhile to discern the guiding ideology behind the Bush Administration’s poisonous science policies..... The truly poisonous legacy of that eight years as one that spread to much of society and will therefore be much harder to undo the utter contempt with which those in power viewed inconvenient facts, empiricism and science in general.”

One official explained to Begley and journalist Ron Suskind in 2002 that the Bush Administration had nothing but disdain for what it called “the reality based community ...people who ‘believe that solutions emerge from judicious study of discernible reality.’” (science). Begley said the official told them: “We create our own reality.”

Begley reports that public trust in the integrity of science (particularly about stem cells, global warming, and sex education) has been undermined where wishful thinking rather than science was employed. Antiquated frames of reference were used by those who said “they create their own reality.” These frames (mindsets) continue to be promoted by our schools and universities in an unconscious manner.

Conventional methods of studying education and of explaining the world are reviewed in the light of new findings. Einstein and Zen practitioners knew from direct experience. David Brooks reports: “Most successful people also have a phenomenal ability to consciously focus their attention. We know from experiments with subjects as diverse as obsessive-compulsive disorder sufferers and Buddhist monks that people who can self-consciously focus attention have the power to rewire their brains.”

Students and teachers traditionally were not urged to be powerful researchers (regarding “hows”). Zen and Einsteinian thinking urge teachers and learners to be open researchers, unblemished by what others say they know.

Zen contextualizes facts in an almost unbelievably broad way. Zen had previously been devalued and excluded from Western ways of thinking. In the view of Richard Nisbett’s, *The Geography of Thought*, Zen thinking may be seen in a different light. Schools and universities have become so far removed from the early Greek notion of playing with ideas that schools now often seem inextricably ensconced as a place where one is to fill one’s mind with facts (“that’s”), many of which are trivial and most of which will soon be outdated.

Most citizens were trained in our nation’s schools and as a result it is taking us longer than a little while to discern the guiding ideology behind the former conservative, governmental-industrial-complex. We have been traditionally trained so well to obey authority that most of our teachers, professors, and school administrators are obeying (external) authority by primarily disseminating information (thats), rather than providing conditions whereby our students and citizens learn to decide for themselves. It is helpful to keep in mind that consciously giving up some freedom, at times, provides more freedom. That implies those

thinking for themselves, as Todd May said: those who ...”have the courage not to know what everyone else knows,” will find more powerful learning and democratic living.

President Obama clearly stated that citizens are responsible for our government. Obama campaigned... “on the need for improving teacher preparation and educational testing to reflect the kinds of research, scientific investigation, and problem solving that our children will need to compete in a 21<sup>st</sup>-century knowledge economy.”

Some events have gone unnoticed. It is now time to notice that the guiding ideology behind our nation’s schools and universities is training and evaluating people for corporations, rather than remaking America and helping people be responsible. When responsible, one can think something, as Einstein suggested, that can’t be learned from textbooks. Having the courage not to know what everyone else knows, and the ability to decide for oneself what will secure or endanger one’s freedom cannot be learned directly from textbooks, or from simply accumulating information given by authorities.

Examining some of Einstein’s social ideas demonstrates they parallel Thomas Jefferson’s and John Dewey’s ideas about education (development of self direction which implies noticing “what is”). Zen implies, and experientially demonstrates, the power of deciding for oneself and noticing what is.

Evidence to support this is reported by Mary Carmichael who said: “There’s animal research that suggests why something that should lower stress can actually cause stress if it is done in the wrong spirit. In a classic study, scientists put rats in a cage, each of them locked in a running wheel. The first rat could exercise whenever he liked. The second was yoked to the first, forced to run when its counterpart did. Exercise, like meditation, usually temps down stress and encourages neuron growth, and indeed, the first rat’s brain bloomed with new

cells. The second rat, however, lost brain cells. He was doing something that should have been good for his brain, but he lacked one crucial factor, *control*. He (the controlled rat) could not determine his work-out schedule, so he didn't perceive it as exercise. Instead he experienced it as a rat race. This experiment brings up a troubling point about stress. Psychologists have known for years that one of the biggest factors in how we process stressful events is how much control we have over our lives. As a rule, if we feel we are in control, we cope. If we don't, we collapse." Students do not have sufficient control in schools and universities for optimum development of brain cell and development of self direction.

Schools and universities can be stressful places and have become training places for corporations where students have little control. As a result, citizens notice less and think they have less power to work toward what democracies need to do. This stifles the remaking of America. As a result of narrow school and university training, citizens wait for some corporate or governmental authority to curtail the injustices done as a result of placing power in the hands of relatively few. We now train students for skills that will soon be outdated.

Schools and universities have trained us to be more fearful of making mistakes, and as a result, we keep our mouths shut about injustices. Our schools remain far behind what they could be in light of the current acceleration of the doubling of our fund of knowledge. Research by Karl Fisch, Scott McLeod, and Jeff Bronman support the notion of unusual rapidity of change. They say:

"There are about 540,000 words in the English language; five times as many as Shakespeare's time. It is estimated that a week's worth of New York Times contains more information than a person was likely to come across in a lifetime in the 18<sup>th</sup> century. It is estimated that 4 exabytes (1 exabyte = 1,099,511,627,776 megabytes) of unique information

will be generated this year. That is more than the previous 5000 years. For students starting a four year technical degree, this means that half of what they learn in their first year of study will be outdated by their third year of study.” One recent candidate for the presidency of the American Psychological Association predicted that by 2024, our fund of knowledge would be doubling every 17 days.

Einstein’s thoughts may help us learn to reduce silence about injustices. When we have the courage not to know what everyone else knows, we can independently think and decide for ourselves. Einstein inquired into what was interesting, remarkable, and important to him. He wondered much and he found the process of inquiry was similar to wonder in democratic action. Present awareness is needed for inquiry and for being at ease.

Inquiry into inquiry, older mindsets hold, is fraught with the danger. Inquiry into Zen often produces unexpected, powerful results. One can be aware of one’s awareness but it is difficult to describe or explain. The canons of scientific investigation hold that one ought not to search one’s searching while one is searching since infinite regress arises. Infinite regress is alluded to when the noted physicist, Sir Arthur Eddington said: “It is a primitive form of thought that things either exist or do not exist.” If the universe were highly stable and linear, where things either exist or not exist, such a canon may be of value. A “certain” universe does not exist yet schools and universities often act as if one does.

Physics has no “now” as Nobel physicist Richard Feynman said. Other scientists often follow physicists in their desire for precision of measurement. “Now” is the only time awareness can occur. A part of inquiry into inquiry deals with awareness, and since awareness can only happen in the present, dealing with “now” is unavoidable. Einstein said:

“Modern science when measured against reality is primitive and childlike.” Having no “now” may contribute to making physics primitive and childlike.

This writing attempts to show that Einstein, while imperfect, was not only a scientific genius but a social genius as well. Extensions of Einstein’s thought may help us know more by accepting uncertainty and increasing tentativeness. Einstein implies uncertainty and appropriate “not knowing” may help us know more, and may help one free one’s self. Einstein would agree with Roger Cohen who said: “The artificial preservation of the inert dampens the quest for the new.” Einstein would also agree with the “impermanence surrounds us,” of Zen.

Zen and “not knowing” (in only an intellectual way) go together. As we free ourselves we can more readily accept growing uncertainty, not only about science and technological change, but also about “the market,” ourselves, and national and international social intercourse. (Citizens who want excessive certainty may contribute to economic breakdowns and violence.)

Einstein’s other breakthrough thinking was being compassionate, and helping one think something that can’t be learned from textbooks. Einstein was an aggressive pacifist when it came to promoting justice. Einstein’s recent biographer, Walter Isaacson, said Einstein was a pacifist saint. Einstein was noticeably anti-racist. He was probably anti-sexist and anti-homophobic as well.

Richard Nisbett’s research shows that East Asian thought is noticeably more holistic than Western thought. Aspects of Eastern thinking helped generate quantum physics about which Einstein had reservations, yet his thinking was broad enough to go beyond Eastern and Western thinking.

Early East Asians never separated philosophy and poetry. As a result of separating philosophy and poetry, Westerners treat justice more as a science. East Asians treat justice more as an art. Einstein's thinking went beyond both East and West as does Zen. Einstein thought a great scientist was also a great artist. Einstein did not make the mistake of separating philosophy and poetry. Einstein sounds unconventional when he said about research : if we knew what we were doing, it wouldn't be called research.

Malcolm Gladwell's 2008 keynote address to the American Psychological Association urged psychologists to study the notion that adversity breeds success. He asked: "Why don't we set up structured disadvantages?" Gladwell said: "The danger lies in not entertaining the question."

One type of structured disadvantage is functional discontinuity. When one is wondering about an event, there is a gap in one's knowledge structure. When a teacher demonstrates a perplexing or discrepant event; something that turns out at variance with the student's expectations, the student is often surprised and a gap often opens in the student's knowledge structure. Focus often assists powerful learning. Jonah Lehrer, (*How We Decide*) brain researcher, says: "Nothing focuses the mind like surprise." Discrepancies are often surprising.

The mental gap, often opened by surprise, is a discontinuity which, if focused on, can function in creating a larger continuity; an aha! Teachers helping students get moderately stuck is a provision of functional discontinuity, which "works" mainly in freer, responsive, environments.

When one has a mental gap (is stuck), one often has the question: "I wonder why that event turned out that way?" That question leads one to ask what it is they need to know in order to explain the discrepancy. The student's traditional scope and sequence of learning are often

different when open inquiry is the primary goal of instruction. Most curricula require students to remember discrete pieces of information in a prescribed order. Information and skills are acquired as one inquires but not in the same sequence as a school prescribed curriculum for everyone.

One often initially interprets a mental gap as a disadvantage in the sense that one is often more advantaged (temporarily more at ease) when there is no gap; when one “knows the answer.” This gap is initially structured by a teacher demonstrating a discrepancy. The mental gap appears disadvantageous at first since the teacher does not give an answer to the discrepancy. One’s knowing one doesn’t know turns out to often be more advantageous in the sense that one uses one’s mind to generate a workable solution to what appears discrepant. The workable solution closes the gap (finding out what one is wondering about—an aha!). One learns to use one’s mind by using one’s mind. Noticing what is helps.

Schools and universities have often made the mistake of giving students answers before students have questions. Structured disadvantage, what Gladwell is asking psychologists to investigate, can be temporarily functionally discontinuous to facilitate the student’s generation of a larger continuity. Functional discontinuity is placing gaps in a student’s knowledge structure thus generating student wonder and inquiry. Through inquiry, students realize they have the power to close mental gaps. As gaps are closed, the students often allow themselves openness to wonder from which other gaps and ahas! arise. As they know they don’t know, their wonder and inquiry continue and more ahas! arise. Students become their own authority. One can become one’s own oracle.

Daniel H. Pink, *A Whole New Mind: Moving From the Information Age To the Conceptual Age*, shows how one can be one’s own oracle by a more integrated and greater use of the right

brain. The left brain is sequential, functional, textual, and analytic. The right brain is simultaneous, metaphorical, aesthetic, contextual, and synthetic. Pink said the right brain has been neglected by schools. We need both hemispheres in order to function well. Pink says that in the past we have been overly left brained and we have been enthralled by reductionism and binary thinking. We will need much more in order to be happy and successful now. Asia, particularly India and the Philippines, have taken many left brain, information age jobs from the USA.

Niels Bohr and Einstein disagreed about some aspects of quantum mechanics, but Einstein would agree with Bohr who noted: “Causality may be considered as a mode of perception by which we reduce our sense impressions to order.” William Bryson reported Bohr said we ought to ask not if quantum theory is crazy, but rather: “Is it crazy enough?” Some of Einstein’s thought and Zen appear crazy when first considered, especially through looking with habitual, outdated mindsets.

Quantum theory applied to mathematics has created quantum computers, which when kinks are worked out, will compare to present day computers, as atom bombs are to firecrackers. Quantum theory is also now applied to biology. The end is nowhere in sight for joint efforts of people and intelligent machines. Schools and universities are barely considering these matters.

Einstein said: “The finest emotion of which we are capable is the mystic emotion. Herein lies the germ of all art and all true science. Anyone to whom this feeling is alien, who is no longer capable of wonderment and lives in a state of fear, is a dead man. To know that what is impenetrable for us really exists and manifests itself as the highest wisdom and the most radiant beauty, whose gross forms alone are intelligible to our poor faculties – this

knowledge, this feeling ... that is the core of the true religious sentiment. In this sense, and in this sense alone, I rank myself among profoundly religious men.”

Jonah Lehrer speaks of the dopamine release with a feeling of pleasure on anticipation of what previously created the dopamine release. My survey of students reveals most students do not anticipate their classroom experiences to bring a dopamine reward, except for students who are free to evaluate themselves when they study what is interesting, remarkable, and important for them.

While neuroscience has not yet made definite findings indicating that students learn more profoundly when they are free to decide for themselves what, when, and how to study, asking yourself, under which conditions you best powerfully learn, may be a clue to lead you to promoting more freedom for students.

I do not mean freedom to choose between the even and odd numbered problems in a math book. I mean freedom to decide what is important to study and what and how to study it. When the students are free to evaluate themselves and decide to take certain courses, training in these chosen courses could be graded and often evaluated by the teacher or professor if the student wanted that information. Frequently, however, students are not free to choose from a wide variety of courses. Their electives are often few except in free schools. Schools are often coercive and students, former students, and teachers (most of us) have been programmed not to notice it.

It is expected that powerful mystic emotions from which one powerfully learns, only arise when one allows the mystic emotion to be present. We have not been trained to be receptive. Kabbalah means to receive. (Mainly Hebrew, but Christian and other religions have Kabbalistic writings.) Perhaps the Jewish culture is noted for promoting powerful learning

because of focus on receptivity (openness yet other meanings also exist). If one pays attention to the mysterious, more productive learning may result. Einstein and Zen practitioners demonstrate they allow for one to feel more control. Self-direction, self organizing can only go on when one is in control of the direction and organizing.

Paradoxically, seeking in the present is powerful while seeking in the future is not seeking. Experience is most powerful when one notices what is happening “now.” Seeking in the future or past may prevent paying attention to what is happening now.









## Chapter 1

### TRANSCENDING LOCAL THOUGHT

“All our science, measured against reality, is primitive and childlike.” Einstein

Robert Kennedy, a Jesuit priest, is also an ordained Zen Master. To be both a Catholic Priest and a Zen Master, Kennedy said he had to transcend Christianity as well as transcend Zen. It is difficult to transcend Zen since Zen is all inclusive and transcends rational explanation of events. This writing will explore what occurs when we transcend earlier ways of thinking related to the notion of transformation. Transcending includes broadening views of science and art. This writing explores the process of transcending and transforming to notice when and where this process may profitably be used for optimum human growth and development. The following story introduces a way to begin.

There is an old story of a farmer whose horse ran away, and the farmer’s neighbor comes to him and said: “You unlucky man. Your horse ran away.”

The farmer responded: “Maybe so.”

The next day the farmer’s horse came back with another horse and his neighbor then said: “Oh you lucky man; you now have two horses.”

The farmer said: “Maybe so.”

The next day a farmer's son fell off the new horse and broke his leg. The neighbor then said: "Oh you the unlucky man. Your son broke his leg."

The farmer said: "Maybe so."

The next day conscriptors for the local government's army came around to take the son into the army to fight in the upcoming battle with a neighboring state. The neighbor came to the farmer and said: "Oh you lucky farmer, your son will now not have to go into the army and fight in the battle."

The farmer said: "Maybe so."

The farmer knew tentatively. Extending tentativeness, we may say the farmer knew everything and everyone is in process. We know something through stopping the process of which a "something" is a part. We know with greater certainty when we stop a process to create a permanently knowable event. We know with less certainty when we consider larger contexts as when we, at least at times, investigate our investigating while we are investigating. A form of this investigating is noticing what is happening while it is happening. This writing explores whether paying attention to one's present experience is helpful in scientific and non-scientific endeavors. It seemed to be for Einstein.

Einstein said: "I know that it is hopeless undertaking to debate about fundamental value judgments. For instance, if someone approves, as a goal, the extirpation of the human race from the earth, one cannot refute such a viewpoint on rational grounds. But if there is agreement on certain goals and values, one can argue rationally about the means by which these objectives may be obtained. Let us, then, indicate two goals which may well be agreed-upon by nearly all who read these lines.

One. Those instrumental goods which should serve to maintain the life and health of all human beings should be produced with the least possible labor for all.

Two. The satisfaction of physical needs is indeed the indispensable precondition of a satisfactory existence, but in itself it is not enough. In order to be content, men must also have the possibility of developing their intellectual and artistic powers to whatever extent accords with their personal characteristics and abilities.” Einstein wanted what may be tantamount to an expansion of our democratic value system including more cooperation while reducing competition. About this Machiavelli said: “There is nothing more difficult to carry out, nor more doubtful of success, nor more dangerous to handle, than to initiate a new order of things.”

Einstein knew that everything that occurs, occurs in the present. Einstein also knew everything is in process.  $E=mc^2$  is a process. To measure, we stop a process and make what may be nonlinear, linear. At times, doing so may be primitive and childlike partly because we have been trained to think things either exist or do not exist.

Imperfection is a given for all people and events, including measurement, yet people can imagine “perfection.” When noticed narrowly, an ideal is perfect. When one thinks an event is isolated, one does not notice the event is connected to a larger whole. In a context for a whole (event), more can be connected or subtracted from that whole. Contexts can be narrowed and expanded. At times, expanding, as well as some unifying, may be useful for understanding complexities. Learning complexities is an aspect of learning to learn. When one continues to learn only nonsense syllables, one often notices there is more to living than learning nonsense syllables or other trivia.

This expansion could possibly continue, as we will later see when Zen is considered. With

Zen, one notices the possibility that one may, at times, notice that everything may cause everything else. That may be tantamount to “no explainable cause.” No explanation is logically similar to all explanation. There may be no one cause of an event yet Western cultures often tend to think there is. East Asian cultures, according to Nisbett, hold more frequently to multiple causes. Can the multiplicity of causes be so great as to be tantamount to no cause? East Asian cultures more readily learn what can’t be said because of their considering “more” than Western cultures, in that at times, multiple causes are found for most effects.

Einstein thought a liberal education helped one think something that could not be learned from textbooks. What can’t be learned from textbooks is that which can’t be said. The early Chinese sage, Lao Tzu, thought that the way that can be said is not the way. This thought, at least at times, may apply to science to make modern science less primitive and childlike. This writing will, in part, talk around what can’t be directly said and will allude to what can be said about what can’t be said.

In order to understand more about what can’t be said, the social thought of Albert Einstein will be used. Einstein’s thought continually refers to the benefit of an individual acting for the community. The community, to Einstein, is more important than the individual. It is posited that this benefit of the community rather than the individual is at the heart of “kind, compassionate thought.” Different kinds of kind thought will be looked at through Nisbett’s, *The Geography of Thought*, so as to provide grounds for talking about learning what can’t be said.

Learning what can’t be said includes what is known and what is unknown. Furthermore, it is posited that some residue of “unknown” will always remain regardless of the thoroughness

of the analysis, synthesis, and evaluation. As Einstein talks about freedom, note there is no perfect “freedom.”

According to cognitive scientist George Lakoff, *The Political Mind*, freedom, for political conservatives, relates to being free within the framework of "obedience to authority." Freedom for political liberals relates more to empathy, openness to move anywhere, cooperation and helping others in a positive way. (Einstein falls into this more open camp.)

### EINSTEIN FREED HIMSELF

“For to be free is not merely to cast off one's chains, but to live in a way that respects and enhances the freedom of others.” --Nelson Mandela

“We are all too much inclined to walk through life with our eyes shut. There are things all around us, and right at our very feet, that we have never seen; because we have never really looked.” Alexander Graham Bell

The old story about a person wanting to know where he should be was given the answer that he should look at his feet. This may later be seen as a wise start.

Einstein was a highly aware, profound inquirer. One might be surprised that Einstein said: “The true value of a human being can be found in the degree to which he has attained liberation from the self.” Did he think anything was more important than learning to be free

from a separate self? Awareness and inquiry appear to be a route through which Einstein highly valued learning, and the value of liberation from the self. Gladwell's book, *Outliers*, demonstrates the importance of Einstein's early experience and a family which loved wonder and learning. Even though a part of his brain was 15% larger than average, Gladwell would give nurture more importance than nature for Einstein's genius. Einstein was aware that people and physical events were more connected than separate. Awareness of a greater connection than separation was the liberation about which Einstein spoke. One can tell when one has awareness of a greater connection through noting when one behaves kindly. Theodore Ruben wrote: "Kindness is more important than wisdom, and the recognition of this is the beginning of wisdom." Einstein's concern for the community indicated Einstein would agree with Ruben.

Einstein, while imperfect, was a very kind person. He said: "Only a life lived for others is a life worthwhile....The life of the individual has meaning only insofar as it aids in making the life of every living thing nobler and more beautiful. Life is sacred, that is to say, it is the supreme value, to which all other values are subordinate. This statement is very closely connected to Zen.

His liberation from the self led him to think that all he needed was a table, chair, bowl of fruit, and a violin. He appeared to often be surprised at all the praise and accolades he received. Einstein seemed to be humble and self-aware as evinced by his following statements:

"Try not to become a man of success but rather try to become a man of value..."

"A hundred times a day I remind myself that my life depends on the labors of other

men, living and dead, and I must exert myself in order to give, in the measure as I have received, and am still receiving...”

“The high destiny of the individual is to serve rather than to rule...”

“In the middle of the difficulty lies an opportunity.”

“When he who can no longer pause to wonder and stand rapt in awe is as good as dead; his eyes are closed....”

“I believe that a simple and assuming manner of life is best for everyone, best both for the body and the mind.”

“The most important human endeavor is the striving for morality in our actions. Our inner balance and even our very existence depend on it. Only morality in our actions can give beauty and dignity to life. To make this a living force and bring it to clear consciousness is perhaps the foremost task of education. The foundation of morality should not be made dependent on myth nor tied to any authority lest doubt about the myth or about the legitimacy of the authority imperil the foundation of sound judgment and action.” (letter to a minister . November 20, 1950; from *Albert Einstein the Human Side*, Helen Dukas and Banesh Hoffman, eds., Princeton, New Jersey: Princeton University Press.)

“The ideals that have lighted my way, and time after time have given me new courage to face life cheerfully, have been kindness, beauty, and truth... The trite objects of human efforts - -possessions, outward success, luxury - -have always seemed to me contemptible.”

“The led must not be coerced; they must be able to choose their leader.... My opinion of

the human race is high enough that I believe this bogey (unthinking following, the loathsome nonsense that goes by the name of patriotism—my brackets) would have disappeared long ago, had the sound sense of the people's not been systematically corrupted by commercial and political interests acting through the schools and the press.”

If a Zen master found a need to speak, except perhaps for the last quote, the Einstein quotes could also be a quotes of a Zen Master.

Becoming aware and openly inquiring usually involves making mistakes. Progress of many kinds is facilitated by allowing mistakes. It is almost impossible to be aware and inventive when mistakes are to be avoided. Our schools and society do not prepare us to make mistakes and as a result, we are often unimaginative. An aspect of powerful learning is to learn to give oneself conscious permission to make mistakes. As a psychotherapist Sheldon Kopp said in his eschatological laundry list: “Learn to forgive yourself, again, and again, and again.” His list began: “This is it.”

An extension of Einstein's thought is a (later amplified), not-yet-clearly formulated, educator's equivalent of a mathematician's zero. This possible educator's zero could help one unlearn what needs to be unlearned before more powerful awareness and learning may arise. Some aspects of early Eastern thinking are connected to what may be called an “educator's zero.” It is in combining Eastern with Western thinking that adds power to Einstein's social thought. Zen includes aspects of an Einsteinian mind opener; an educator's zero.

The needed unlearning applies to teachers and school administrators as well as students. We want schools to account for their behavior. A major result of school accountability is that we only account for events that are easily measured (often quantifiably). Because aspects of powerful learning, such as “present awareness, self-direction, open inquiry, and loving

learning” are difficult to measure, schools and universities often do not have powerful learning goals for daily classroom activities. As a result, American schools and universities are grossly failing. It is projected that powerful learning arises from open awareness. Awareness is present awareness. What one remembers is a present remembrance, and what one now says about a possible future happening is a present anticipation. Past and future only exist as a present remembrance or a present anticipation.

The following is a paraphrasing of Begley’s Newsweek column on global warming. I changed the topic to schooling: Poor schooling is a cause of this year’s evidence of poor judgment.

It is almost a point of pride with school reformers, whenever we notice poor judgment reflected in any election, any injustice, hunger, general lack of health care, or other societal devastation, educators trip over themselves to absolve the common practices that now go on in schools and universities. No particular schooling event, goes the mantra, can be blamed on some things so varied and general.

Poor schooling occurred before educators began filling minds with mind trapping trivia such as found in many curricula. So this or that evidence of poor schooling could be the result of the same natural forces that prevailed hundreds of years ago – careless delivery of curricula, lack of funds and quality teachers, class size, low interest levels on the part of teachers and students – rather than the core of schooling.

This pretense has worn thin. The frequency of poor teaching, as well as the excessive testing of trivia are partly generated by the out-dated school mindsets.

The No Child Left Behind law is now so commonplace. As was said in the 1993 Nation At Risk report, if an unfriendly of foreign power would place on our society the poor schooling,

we now have, we would consider it an act of war.

Political conservatives and political liberals, according to Lakoff, account differently. Most of what it is said here arises from a political liberal frame. Lakoff concludes the conservative political view destroys democracy and freedom of the type our founding fathers had in mind.

Lakoff says meaning is found within frames, narratives and metaphors. Different frames give different meanings to narratives and metaphors. Often we hear there is no one narrative to explain all narratives. That is true and has meaning within more open, more liberal frames. It is not true within narrow, rigid, conservative frames. Inquiry, to the narrow people desiring certainty, is that which supports and confirms what is thought to be true; often that thought to be revealed by God in the Bible or Quran. As mentioned, the United States Federal Government, from 2002 through 2008, only accepted research reports which already agreed with the political conservative frame. This narrow mindset accepts research which supports it and rejects research which does not. "Frame" is similar to my use of "mindset" in that both are fixed and often comprehensive. The more liberal mindset is noticeably more open and less fixed.

Begley reports brain plasticity reveals we have power to change our brains even into our later years. She also mentions new neurons can be formed. Not long ago it was thought that new neurons could not be formed after an early age.

This writing examines change and activities related to brain plasticity, open inquiry, unlearning, and awareness for what Einstein thought was powerful education. Some notions may need to be unlearned in order to guide or reveal what hypotheses could now profitably be tested. Einstein, and other Nobel laureates used unproved and perhaps un-provable ideas as guides to discoveries which might later be proved. It is assumed that the process of brain

plasticity may be used as a guide to explore the process of open inquiry and unlearning even though the process of open inquiry may never be clearly defined. Open inquiry is difficult to define since it is a complex process which does defining. Awareness, by many views, is even more basic than inquiry.

*Wired* reports: “We're nowhere near figuring out how to see into the future, but neuroscientists are devising a method to predict mistakes. The Proceedings of the National Academy of Sciences published a study where researchers recorded neurological patterns preceding careless errors. This could lead to a biofeedback system that helps us catch mistakes before making them. That's certainly more civil than throwing a group of test subjects into a tub and plugging them in.”

Most researchers rely on methods and procedures of physics and mathematics. A quick look at some recent findings may help note that social science may profit from going beyond methods and procedures of physics and math. Noticing some uncertainties in math and science may also help us accept more uncertainty in the social sciences. The brain's plasticity facilitates one's knowing as well unlearning what is not so. As has been said, when one's only tool is a key, every problem may appear as a lock.

The brain's plasticity may help one notice one's brain has many tools some of which may be highly fuzzy. The brain's plasticity may help us reduce some certainties as well as help us to accept the gross uncertainty that arises with noticing that the universe has no edges as well as no center. The brain's plasticity can help us accept notions of quantum physics such as a particle going through a slit, and not going through a slit, simultaneously. A flexible open brain can help one notice the value of accepting ambiguity and uncertainty. Brain research is of great interest to the Dalai Lama. He wrote the Foreword to Begley's, *Train Your Mind*

*Change Your Brain.*

Begley reported, Dec. 1, 2008 *Newsweek*, that people tend to become more conscientious and emotionally stable from ages 20 to 40. She states: “After age 40, they tend to become less open to new experiences and ideas, and less outgoing. All of these traits have been linked to genes. That curiously - - and here’s hope for anyone who resents his genetic baggage - -the influence of genes wanes with age: in middle and later adulthood, environment plays a larger role than genetics in shaping personality, a hint of the power of accumulated experiences.” Gladwell agrees.

Begley reports that DNA is not “an inert set of blueprints; it responds to life experiences.” She gives an example of a study which showed rats that are the groomed and licked by their mothers “turn off brain genes linked to fear of the unknown and neuroticism.” She gives evidence that humans can change broad traits that were previously thought of as stable, including “openness to experience, consciousness and sociability,” if one changes one’s beliefs.

These findings support Einstein’s notion that through noticeably changing modern methods of instruction, students can think something that can’t be learned from textbooks. Begley states: “Something that seems like a small intervention can have a cascading effect on things we think of as stable or fixed,... including extroversion, openness to new experience and resilience - - all of which are thought to be partly genetic.” Research is demonstrating what Margaret Mead said many years ago; that we’re using only 10% or less of our brainpower. Einsteinian/freer/Zen type schooling can change that.

Being less certain may help open our minds to previously unconsidered possibilities. Researchers will be ill-prepared to do break-through research unless those researchers give

themselves permission to make mistakes. Schools and universities have trained us to avoid mistakes. Brain plasticity can help one educate oneself so as to allow one to accept making mistakes. We could improve schools and society by encouraging school personnel to allow students to “make mistakes.” As Max Planck, a founder of quantum physics said: “Let us get down to bedrock facts. The beginning of every act of knowing, and therefore the starting point of every science, must be in our own personal experience.” Changing our brains changes our experience. Begley shows that changing our experiences changes our brains.

Einstein’s personal experience led him to the value of liberation from the self. I interpret his idea of liberation from the self as “liberation from a separate self.” He saw each of us were more connected to each other than disconnected as a Zen masters imply. He said: “Only a life lived for others is a life worthwhile.” He also said: “The high destiny of the individual is to serve rather than to rule.” Notice the type of education and experience Einstein had in order for him to conclude: “Human beings can obtain a worthy and harmonious life only if they are able to rid themselves, within the limits of human nature, of striving to fulfill wishes of the material kind.” The Dalai Lama thinks freeing oneself from being a separate self, helps one become kind.

Einstein also remarked: “Our task must be to free ourselves by widening our circle of compassion to embrace all living creatures and the whole of nature and its beauty.” Note that Einstein also said: “Without deep reflection one knows from daily life that one exists for other people.” Some of Einstein statements are similar to those held by some Zen Masters. Existing for the unit of others and one’s self is what Zen Buddhist Bodhisattvas do.

We are all involved in a web of social pressures. About this, Harvard's John W. Gardner said: “The creative individual has the capacity to free himself from the web of social pressures

in which the rest of us are caught. He is capable of questioning the assumptions that the rest of us accept.” Einstein seems to agree with Gardner. Einstein was highly creative and he wished that creativity would be a part of each of us. Einstein said: "The world is a dangerous place to live; not because of the people who are evil, but because of the people who don't do anything about it.”

To reduce the danger, not only for the reader but for the reader's family, friends, and community, re-systemizing our schooling may help us better see what Einstein saw when he said: "Peace cannot be kept by force; it can only be achieved by understanding."

Very close to statements of some Zen Masters is Einstein's statement: "A human being is a part of the whole, called by us 'Universe,' a part limited in time and space. He experiences himself, his thoughts and feelings as something separated from the rest is a kind of optical delusion of his consciousness. This delusion is a kind of prison for us, restricting us to our personal desires and to affection for a few persons nearest to us. Our task must be to free ourselves from this prison by widening our circle of compassion to embrace all living creatures and the whole of nature in its beauty. Nobody is able to achieve this completely, but the striving for such achievement is in itself a part of the liberation and a foundation for inner security." That too could have been said by many Zen practitioners.

Einstein's ideas are interspersed throughout the book. In order to communicate some nuances of his thought, the following brief review of recent findings is given.

## PHYSICS AND AWARENESS

Within the last 15 years physicists have found that only 4% of our universe is matter and energy. The remaining 96% is dark energy and dark matter about which almost nothing is known other than dark matter and energy appear to be facilitating the expansion of our universe. (73% is dark energy and 23% is dark matter.) Physicists are now searching for a “god particle,” also called a Higgs particle. Peter Higgs, physicist, predicted its existence over 40 years ago, and when it is found through colliding protons, physicists hope to know more about beginning of the universe as well as what is happening now. “The Higgs particle would be the carrier of the field and would interact with other particles, as an unknown author stated: “sort of the way a Jedi Knight in Star Wars is the carrier of the ‘force.’ The Higgs is a crucial part of the standard model of particle physics - -but no one’s ever found it.” (March, 2008, National Geographic).

The big bang theory states that the known universe once had no dimensions, no passage of time, no down or up, no right or left, and laws of physics beyond what can now be seen. When the early universe expanded, the energy should have condensed into equal amounts of antimatter and matter, which would then have destroyed each other on contact. Some physicists think there may be many big bangs in our universe and some think universes are popping in and out of existence often. In 2008, dark flow was discovered. Dark flow is that which is thought to be moving clusters of galaxies at speeds far higher than can otherwise be accounted for.

Within the last 25 years five string theories were created. They were designed to explain everything. Relatively recently, physicist Edward Witten, has united the five string theories

into the M theory. M theory includes membranes, some of which may be as large as the universe. M theory requires eleven spatial dimensions. Some of these dimensions are too small for us to notice. Parallel universes are possibilities as are wormholes through which we may travel, not just in space, but also in time. Einstein united space and time. A distant hope of physicists includes teleportation of complex molecules in coming years, and teleporting a DNA molecule or virus within decades after that.

Another important change within the last 20 years is the finding that brain cells which were previously thought not to be formed after a relatively early age, can be developed. Physical exercise can retard development of Alzheimer's disease as well as make healthy brains healthier.

Physicist David Bohm, an Einstein associate said: "Matter is like a small ripple on this tremendous ocean of energy, having some relative stability and being manifest....and in fact beyond that ocean may be still a bigger ocean... the ultimate source is immeasurable and cannot be captured within our knowledge."

Carlo Rovelli, a physicist at the University of Mediterranean in Marseilles, France, said "it is an issue that many theorists have puzzled about. It may be that the best way to think about quantum reality as to give up the notion of time . Discover,Einstein,2009 said: "Rovelli thought 20<sup>th</sup> century physics will inevitably describe the universe in which, ultimately there is no time. The laws of physics do not explain why time always points to the future all the laws - - whether Newtons, Einstein's, or the quirky quantum rules - - would work equally well if time ran backward. As far as they can tell, though, time is one way process; it never reverses, even though no laws restrict it."

To make it easier to accept social change, more interesting and infrequently considered facts

are given. Unusual and impermanent events surround us. Georg Cantor found some infinities are bigger than others. Cantor's finding is reported in *The Infinite Book*. Bruno Maddox says in the May, 2008 issue of Discover Magazine: "Three words that could overthrow physics:" "What is magnetism?" There is much about magnetism that physicists do not know. "Nobody knows how a magnet can move a piece of metal without touching it," says Maddox. Furthermore, biologists do not know what life is, mathematicians do not know what proof is and philosophers do not know what truth is. As you read more you may notice that tentative knowing, may improve our general knowing, and expand one's openness thereby allowing one to more fully become aware of what is.

"What is now proved was once only imagined." --William Blake

Blake was a poet who anticipated unification when he said:

"To see the world in a grain of sand,  
And heaven in a wild flower.  
To hold infinity in the palm of your hand,  
And eternity in an hour."

Another Jonah Lehrer book, *Proust Neuroscientist*, shows how poets and artists were our first neuroscientists.

How often do we notice that the sum of the even numbers equals the sum of the odd numbers plus the sum of the even numbers? We often don't notice until it is mentioned that infinity equals infinity. (Both odd and even have no last number). When we say infinity do we know what we are talking about?

There is magnetic resonance imaging scan called fMRI which enables one to see brain activity. The fMRI may be used, at some future time, not only as a lie detector, but also to

determine the extent of complex brain activity (perhaps including complex learning to learn, the process of inquiry, and aware self-directedness).

Sir James Jeans said: “We find that we can best understand the course of events in terms of waves of knowledge.” Rarely do journal articles and books include the notion of an educator’s equivalent to the mathematician’s zero. When mathematicians invented zero near 750 CE in India and Central America, mathematicians were then able to perform calculations that were previously impossible. The educator’s zero is still in the “what if stage” but what if educators had the equivalent of a mathematician’s zero applied to student learning in classrooms?

Stem cells have been found to generate other cells the body needs. What is the likelihood of stem behaviors which, if learned, may help generate other growth-producing behaviors needed at any given time? Brain changing may generate stem behaviors.

Ray Kurzweil, an MIT award winner, predicted that by 2020, we will have a machine as mentally capable as humans. Ten years after that, intelligent machines will be 1000 times more capable. Kurzweil predicts that in this century we will have 1000 times more technological change than the last century. “The first hundred years of change” will occur in the first 14 years of this century, then the next “hundred years of technological change” will occur in the following seven years, etc.

Kurzweil is the co-founder of [Singularity University](#), a school (supported by Google ) which planned to open in mid, 2009. The university’s goal is: “to assemble, educate and inspire a cadre of leaders who strive to understand and facilitate the development of exponentially advancing technologies and apply, focus and guide these tools to address humanity’s grand challenges.” The March, 2008, National Geographic article on: “God Particle and the Large Particle Collider”

(CERN) mentioned physicist John Ellis confided: “he wouldn’t even mind if the LHC (collider) failed to find a Higgs particle.” (a main particle the collider was built to discover). Ellis said: “Many of us theorists would find that failure much more interesting than if we just find another boring old particle that some theorist (Peter Higgs) predicted 45 years ago.” The Higgs (also called a boson) is what gives others particles mass.

Calvin Linton, former Dean of Liberal Arts of George Washington University, mentioned that our fund of knowledge doubled between 1 BCE and 1750 CE. It doubled again by 1900, then again by 1950, then by 1960, then by 1963. One recent candidate for the presidency of the American Psychological Association predicted that by 2025, our fund of knowledge will be doubling every 17 days. The amount of knowledge available now is staggering. We are approaching a singularity which when reached we will know nothing. Regarding research, Einstein said if we knew what we were doing it wouldn’t be called research. Zen cherishes not knowing in an intellectual sense implying we know from direct experience uncluttered by preconceptions.

How is it that schools choose to teach X, rather than Y, today? What would it take to “teach” how to know and more quickly find out what would be helpful to know at any given time. It appears that we need to look to open inquiry and present awareness as helpful processes. We learn to learn by learning. Learning larger chunks through direct observation and experience may be more useful. Learning to count to the next highest number is useful at a certain point in our lives. If we don’t learn there is no number that represents all numbers, we may simply keep on counting without considering larger elements of reality.

My informal research over many years reveals that within the frame or mindset of most

citizens and more than half of all teachers, “teaching” means “telling. Teacher telling often implies training. Einstein and Zen know that ahas! arise mostly from noticing for oneself (what is going on in oneself ) rather than knowing from being told.

As physicist Edward Witten combined five string theories into M theory which attempts to explain everything (unite quantum mechanics and general relativity), might an exploration of the limits of theory building be useful? Exploring these limits may help us note the conditions for using brains in a better and more efficient way. Ray Tucker, a Bowling Green State University researcher, found speech students achieved 90% of their achievement in preparing and developing speeches, in the first 10% of the time. The last 10% of their achievement took 90% of their time.

Is there a need for exploration before hypotheses are formed to help us find better answers to what could productively occur in classrooms in the light of these recent findings? Explorations are commonly done within accepted frames and paradigms. Multiple frames are sometimes used by individuals. Is there a need to explore limits of productive shifting of some frames and paradigms ?

Newton and Leibnitz have invented infinitesimals, an amount too small to measure which facilitates calculation. If infinitesimals can't be measured, what degree of uncertainty is acceptable. Is there not some uncertainty when we consider a point in mathematics as having no dimensions and in subatomic physics, as having only one dimension?

Some physicists hold there can be big bangs other than the “big bang” that created the universe. Some physicists hold these other big bangs may create parallel universes and include multiple dimensions. Physicists are creating what may be thought of as “near universes” in laboratories by cooling atoms to within a few thousandths of a degree from

absolute zero.

Steven DeMaio gives evidence of how far schools, universities, and students have strayed, partly through carrot and stick motivation, from striving for morality in their actions.. He says: “A [disturbing article from the \*Chronicle of Higher Education\*](#) crosses my path. It's about an international "essay mills" network -- essentially, a global cheating ring in which students from U.S. universities as reputable as U. Penn and MIT outsource the writing of their papers and, yes, dissertations to shady companies that employ underpaid, English-proficient workers in the Philippines and elsewhere. The system is complex, and students' reasons for using it run the gamut. But the common thread is paying someone else to "make a show of it" for you -- to help you merely clear the academic bar, not actually master the art of the vault. “

Some of the vast, murky notions are mentioned to help explore connections between fields which may require looking at higher than acceptable levels of murkiness within our present paradigms. Some paradigm shifting may help us keep abreast of change. When teachers and professors see that consciousness is to brain as wetness is to water, will classroom activities change? What is a role of open inquiry and present awareness in and out of classrooms?

Bernard d'Espagnat, 87, will receive the Templeton Prize of May 5,2009. He played a key role from the mid-1960s through the early 1980s in exploration and development in quantum mechanics, focusing on experiments testing the "Bell's inequalities" theorem. D'Espagnat,said: "Mystery is not something negative that has to be eliminated," On the contrary, it is one of the constitutive elements of being."





## Chapter 2

### **OPEN INQUIRY, ORGANIZING, AND DETAILING**

If it is primitive thinking to hold that things either exist or do not exist, why do we not use multi-valued logic to maintain reasonably honest clarity of expression? We frequently, when viewing a wide variety of research where direct observation is unlikely, want primary sources, and accept secondary sources when it is highly inconvenient to report on primary sources. Current paradigms seem to denigrate reports of thought experiments and explorations which were not previously done by an expert and are not referenced in refereed journals. As a result, researchers frequently do not look at high degrees of murkiness because excessive murkiness implies, under current paradigms, sloppy research and inattention to detail and organization. Also, researchers often avoid “not knowing” and “mistakes.”

Some prominent educators think inquiry is manipulation through leading students to discover what is already commonly known. That is more accurately called “discovery learning.” Einstein’s view of education is providing that which enables one to think something that cannot be learned from textbooks. From this Einsteinian point of view, discovery learning, is narrower than open inquiry. If Zen had views, it would agree. Equating discovery of what is already discovered for open inquiry is a mistake. Discovery learning is not open in the sense that a student is often manipulated to discover what the teacher says, or what the textbooks contain. Inquiry is open or it is not inquiry.

Some current paradigms, including sets of research which are organized and detailed, when looking in uncommon ways at what underlies the underlayment of research, may, at times, interfere with the process of organizing and detailing. Being organized and detailed often includes fixed notions about the process of ongoing, quickly changing, organizing and detailing. Organizing and detailing precede what is organized and detailed. Awareness and open inquiry are what “do” the organizing and detailing in a balanced way.

An example of an imbalanced way, being overly organized and overly detailed is given by Barry Schwarz, a Swarthmore psychologist who spoke of developing practical wisdom through developing judgment. An example of a gross lack of judgment (lack of wisdom) he gives is a true story of a father with his young son at a ballgame. The father bought a lemonade for the son who was thirsty. The father did not know the lemonade contained alcohol. A local official noticed and intervened. An ambulance was called and the child was rushed to a hospital where he was found to have no alcohol in his system. Juvenile authorities then kept the child for three days with the approval of a judge who said the son can go home but not with his father present. After two weeks it was resolved and everyone said they were only following procedures/rules. As our schools teach us, obedience to authority was operating so well that practical wisdom and individual judgment were absent.

Schwarz said: “It takes two things to develop wisdom.... You need to have autonomy, and you need to try things [and] see them fail and get feedback and slowly over time develop a kind of sensitivity to what each situation demands. If you put people in a situation where they are rigidly following rules, they will never have the opportunity to develop this judgment. Rules eliminate the need for judgment. And one of the things we have increasingly done in American society -- partly I think because we're worried about somebody suing us -- is we

develop more and more rules and take individual discretion increasingly out of the hands of the people who actually provide the service [in a company or organization].” Free schools provide the autonomy that Schwarz is talking about.

Chaos researchers in the early stages of chaos research, simply looked at random cloud formations for many hours before order emerged. May we benefit from looking at murky events for much longer than usual so one may possibly become aware of an unnoticed but emerging order? At times, what is already organized and detailed may possibly interfere with the process of organizing and detailing. We may later see the value of “tentative knowing” which arises as a result of what is later called an Einsteinian mind opener. An Einsteinian mind opener may possibly be an educator’s equivalent to a mathematician’s zero.

This suggestion to look for longer than usual at what at first glance might seem like gross murkiness, may produce some kinds of order that were previously unseen and unexpected. Researchers have been taught to be organized and detailed. Semi-random looking at what may be considered random events is not frequently valued. This semi-randomness does not hold promise when considering the paradigms (be “organized and detailed”) under which we have been trained. Organizing and detailing depend on what is to be organized and detailed. The long-range goals of organizing and detailing could healthfully be brought to awareness. Some examples of a lack of common sense by school people who were attempting to follow what had been highly organized and detailed follows: A lack of practical wisdom; a serious lack of honed judgment was reported in the April 17, 2009, USA Today. The article mentioned a six year old boy “who smacked the bottom of a girl in his class at recess was written up for ‘sexual touching’ - - words that will stain his permanent school record.

Also: “A second grader was punished with a one day school suspension for drawing a stick figure aiming a gun at another stick figure.” These were reported as evidence of a lack of common sense.

Being overly organized and detailed can prevent the use of common sense. Policies at times are created to prevent the judgment of the implementers of the spirit of policies from being used. Some policies are designed so that the policymakers can stay in control. The governmental-industrial-complex under the Bush administration declared another excess secrets designed to keep their control firm. Excessive organizing and detailing can prevent inventiveness.

While Einstein was very aware of the debt of past achievements, I mention these matters in order to see open inquiry as indeed open, unbound by anything including current paradigms of research. So one possible event underlying the underlayment may be renewed attempts to view the beginnings of the beginning of consciousness. It may also help to reconsider the beginning of the beginnings of paradigm formation in which we often form hypotheses which may later be tested.

Some readers may consider what has been said unworthy of serious consideration. I'm suggesting that even though we do not have the mentality of Einstein, we may explore unknowns to the degree he did so that a variety of different and potentially productive orders may arise. I'm also suggesting that new orders may not arise unless we attend to the possibility of more paradigm shifting where each paradigm holder, holds, and maybe even cherishes, exploration of fuzzy murkiness for longer than usual.

As Plutarch said: "Music, to create harmony, must investigate discord." If more is to be known, we may need more boldness, and courage in looking at what is unknown. Learning to learn may also require some boldness and daring. Our past training has avoided boldness, and daring. Boldness and daring are often disordered and seen by others as random. We may need to give ourselves permission to make more mistakes before more inventiveness will flow.

More tentativeness about what is known may promote newer and more open-inquiry in schools and universities. Tactics and strategies for doing open inquiry in classrooms at all levels are later mentioned. There may now be a need for researchers to move in the direction of allowing less organization and detail during the process of organizing and detailing from which we become temporarily organized and detailed. Allowing temporarily for less organization and detail may help generate larger chunking until one notes the process of organizing and detailing changes what was previously organized and detailed. What underlies the underlayment? We can only approach quality answers through awareness and open inquiry. Chunking is similar to seeing new and wider organization, and more connections.

## OPENLY INQUIRING

There is a growing number of researchers and educators who believe a breakthrough of some type is needed for schools and universities to be good and effective. Many educators hold learning by doing as a powerful way to learn. We learn to inquire by inquiring. We learn to learn by learning. There is a different quality to the inquiry concerning a topic or question if the inquiry is assigned by the teacher rather than a question or discrepancy chosen by the learner. Teacher assigned projects often involve little open inquiry. When a topic is chosen by the teacher, curriculum, or textbook, inquiry often ceases since the purpose is to find out what the teacher, a curriculum, or textbook has already decided is a correct answer to

a question from an authority. Discovery learning and open-ended inquiry are clearly different.

It is useful to consider that an effective school may not be good, and a good school may not seem temporarily effective. When goals of present awareness, self-direction, inquisitiveness, open inquiry, and love of learning are primary concerns, education can be good but temporarily ineffective in terms of passing many common tests. Does “good and effective” depend on the bases on which “good” and “effective” are determined? If a school’s “achievement” scores are noticeably higher, one may often believe a school is effective. If the achievement test itself (as is true for most standardized achievement tests) gives little information regarding the learners becoming more inquisitive, open-minded, more self-directing and wiser, then the school may be effective in a limited sense but may still not be good. Differences between good and effective will be clearer as Zen is later connected to Einstein’s expanded thought.

It has been said that Einstein’s open mind, which some called “daring,” allowed him to make breakthroughs and see connections others did not see at the time. Rather than see the excessive risk of Einsteinian type daring, greater openness and courage may help additional “riskiness” be seen as appropriate. It may be helpful to consider that Einstein thought “education” was liberal education. Liberal education for Einstein, had as its purpose: “to help one think something that could not be learned from textbooks.” Einstein’s notion of education is clearly different from “training” yet many teachers and professors make little or no distinction between training and education, partly because of the fuzziness and difficulty in measuring events such as self-direction, open inquiry, and love of learning.

In attempting to bring about appropriate school change, and to perhaps to even consider change from impossibilities under current paradigms to possibilities under new and shifting paradigms, might we consider that a moderately risky “action” is to peacefully allow events to happen rather than make events happen. Would we need a new paradigm to consider “not doing” (permitting events and students to be as they are) as a kind of doing? (Learners are learners. Students are too not powerful learners.) Current paradigms focus on making students better which implies higher quality. What is quality and in thought and statement will be immersed in several sections of what is said about Einstein’s social thought.

People of all ages are naturally inquisitive and are natural learners unless the tendency to learn, through excessive external control, is removed from them. (Note the rat/exercise/control research in the introduction.) Paul Torrence found that creativity is knocked out of children by the end of the 3<sup>rd</sup> grade. Notice our children naturally learn a language without a scope or a sequence and without a “teacher.” Everything that child does and every experience a child has can be a “teacher.”

Mostly beyond grade three, children can, if given the opportunity, use their environment and teach themselves. If students were allowed to be “as they are” they would learn well. (See appendix one for the Brooklyn Free School’s aims.) Other free schools have similar in aims.) Students would ask for assistance when they wanted it. Today, “teacher telling” attempts to give assistance where little or none is requested by the learner. Teachers answer questions before students have questions and as a result, students have few questions. Few student questions implies students have little wonder because too much is being crammed into them. Excessive testing required by the No Child Left Behind Act also stifles wonder and love of learning.

Would “not doing” of the regular curriculum and less teacher telling help students become more self-directing, inquisitive and wiser? The ancient Chinese, (and Zen) held “not doing” as a kind of doing. Was their consciousness different from ours in the West? If it was different in a positive way, might we say that people in the western hemisphere have devolved rather than evolved? Perhaps we have done both and we will not know more until we inquire more.

According to author, Byron Katie:

“Inquiry is a way to end confusion and to experience internal peace, even in a world of apparent chaos. Above all else, inquiry is about realizing that all the answers we ever need are always available inside us. Inquiry is more than a technique: it brings to life, from deep within us, an innate aspect of our being. When practiced for a while, inquiry takes on its own life within you. It appears whenever thoughts appear, as they balance and mate. This internal partnership leaves you free to live as a kind, fluid, fearless, amused listener, a student of yourself, and a friend who can be trusted not to resent, criticize, or hold a grudge.”

Outgrowths of Einstein’s mind opening thought require imagination and intuition coupled with logic to notice what may be possible. Reading of Einstein leads one to believe that, for Einstein, nothing was impossible. If you can imagine something, it is possible. It is easier to imagine one riding on a light beam moving at 286,000 miles per second than it is for one to imagine what an Einsteinian mind opener might be. It is even more difficult to imagine what the beginnings of an Einsteinian mind opener may be.

A condition for a teacher to use an Einsteinian mind opener is a more open than usual teacher’s mind. If our minds are only open to the degree to which we usually now find mind opening in schools and society, we can project that student development will continue much

as it is. Schools today, with all the requirements of testing, do not have much time for developing student open inquiry. Another condition for a teacher to use an Einsteinian mind opener is inquisitiveness of the teacher.

Most teachers of teachers have not placed open inquiry as a goal of their instruction. As a result, most teachers have not had time for open inquiry in their schooling, and many teachers think they do not have time for student open-ended inquiry. They don't have time because excessive time given to all the material that must be covered: material that school officials believe students need in order to do reasonably well on tests required by the No Child Left Behind Act and other standardized tests. This common teacher mindset of "no time for open-inquiry" did not arise from teachers openly inquiring. It arose from following orders into which the old school mindset trains students and teachers. Following orders arises from the narrow mindset of the "obedience to authority frame." The general orders of teachers are to disseminate information others think should be disseminated. As the noted educators Bill Pinar and Leigh Chiarelott have mentioned, teachers are delivering other's mail.

"Delivering other's mail" interferes with students developing knowing quality in thought and statement without someone else telling them. "Delivering other's mail" stifles insight and present awareness as well as stifling self-direction, open inquiry and development of a love of learning. Teachers too often obey authority and so do their students. That subservient minding arises from a lack of open goals to have students decide for themselves what will secure or endanger their freedom. Subservient minding arises from the rigid mindset of excessive enforcement of adherence to "obedience to authority."

Lakoff demonstrates the devastating nature of the "obedience to authority" frame. In schools, obedience to authority is more important than student learning. The old school

mindset assumes that one cannot properly learn unless and until one follows the obedience to authority mindset. The more open, empathic, less fixed, frame will more likely bring into our consciousness what has for long remained unconscious. The more open frame fosters empathy, cooperation, and kindness among diverse groups. The obedience to authority, rigid frame promotes competition and keeping diversity at a distance, as well as unkindness to those with whom one competes.

The obedience to authority frame has hierarchies of authority as follows: God over man, man over nature, husband over wife, parents and teachers over children and students, white people over people of color, people over mammals, mammals over animals, animals over vegetation, and vegetation over inanimate structures such as rock, water, etc.

Are the important things in life, air and water so subservient that they can be abused by following the obedience to authority frame? When financial profit is held to be evidence of obedience to authority, as Lakoff implies, then polluting air and water are more important than the G.W. Bush decision to not join the Kyoto treaty to reduce pollution.

I mention these difficult to imagine conditions to better note we can know process, time, and experience, without clearly defining (or imagining) them. Yet we know an infinitesimal without clearly defining/measuring it. We can easily know specific processes (like baking a cake) specific times (like the time you had breakfast today) or specific experiences (like the savory taste of the bacon sandwich you had for lunch recently), but process, time and experience are difficult to imagine or conceive because they are too large to be clearly defined.

Even “mind” is not clearly defined and defining “open” requires 93 lines of an abridged dictionary to begin to define. So it would not be at all uncommon to be confused about what

"mind opening" might be. Einstein allowed himself to notice what is confusing. His confusion led to his sense of wonder which led to his curiosity which led to his open inquiry which led to discoveries that were previously unimagined. Some Zen practitioners are similar.

There is no mental fusion without a mind dealing with confusion. A barely formulated, barely discussed, what may be called an Einsteinian mind opener, could be a variable that takes on values arbitrarily close to infinity. This unnamed variable could be an event immeasurably or incalculably large: almost too large to say much about, but only almost.

Einstein's global thinking shows we can begin to talk about events such as mind opening. Mind opening may require confusion to generate wonder and curiosity so that relaxed, free, and open inquiry may be fostered. What seems to be darkness now, with additional inquiry and noticing can bring light to what is happening.

As a result of closed mindsets, most teachers have not had time for open inquiry in their schooling, and many teachers think they do not have time for student open-ended inquiry in their classroom. They don't have time because excessive time is given to all the material that must be covered. Authorities require schools to give many tests so obedience to authority allows that to occur. Obedience to authority, rather than student learning, is now of paramount importance.

Another condition for a teacher to use an Einsteinian mind opener is the teacher's intention to open minds. In order to intend to use a mind opener, a teacher must believe a mind opener is possible. While it appears to be almost impossible to ride on or near a light beam moving at 286,000 miles per second, it is not necessarily a logical impossibility; nor is a mind opener.

With the kind of teacher training most teachers receive it is very difficult to intend to effectively use a mind opener because most citizens, including teachers, have not had freedom and imagination stretchers during their training and they often do to students what their trainers did to them. Teachers are primarily trained rather than educated making it more difficult to think something that can't be learned from textbooks. Einstein's thoughts about socialization and schooling may become darkness visible or even a bright light. Implications of Einstein's thought for schools and society are not yet freely imagined.

## EXPLORATIONS OF CONSCIOUSNESS

Duane Elgin (Voluntary Simplicity) reminds us (courtesy of Nipun Mehta): "The word 'consciousness' literally means "that with which we know." It has also been termed the 'knowing faculty'. To live more consciously means to be more consciously aware, moment by moment, that we are present in all that we do. When we do the countless things that make up our daily lives, we remember the being that is involved in those activities. We remember ourselves (and to "re-member" is to make whole; it is the opposite of "dis-memberment"). To live consciously is to move through life with conscious self-remembering."

"We all have the ability to consciously know ourselves as we move through life. The capacity to 'witness' the unfolding of our lives is not an ability that is remote or hidden from us. To the contrary, this is an experience that is so close, so intimate, and so ordinary, that we easily overlook its presence and significance. An old adage states: 'It's a rare fish that knows it swims in water.' Analogously, the challenge of living voluntarily is not in gaining access to

the conscious experiencing of ourselves but rather consciously recognizing the presence of this experience, and then learning the skills of sustaining our opening to that experience.”

When attempting to explore the beginning of open inquiry, a conscious activity, must we define inquiry, or do we use inquiry in approaching a variety of flexible definitions? Inquiry arises as we are presently aware of what we are doing (notice that “inquiry” has different meanings when Lakoff’s idea of “frames” is employed). Lakoff mentions empathy is at the heart of open, liberal thinking while obedience to authority is at the heart of more narrow conservative thinking.

The results of the Stanley Milgram research on obedience to authority, 1963, 1965, and 1974, according to psychologist Jerry M. Burger, (American Psychologist, January, 2009) would be similar today. Burger states “Our culture socializes individuals to obey certain authority figures, such as police officers, teachers and parents.” My experience leads me to believe the socializing has been so extensive in schools that we now need to re-socialize so that the conservative frame of obedience to authority can be modified to allow for more empathic and cooperative behavior. It is hypothesized that empathic, cooperative behavior between teachers and learners would increase learners feeling of control thus generating more self directed learning, honed judgment, and reduced stress, instead of students’ interests in high grades, teacher approval, and degrees (what conservative authorities want students to have).

The word “now” is largely undefined and that is perhaps why physicists do not use the term. We all know what “now” means even though various words are used to define it. We all likely “experienced” open inquiry yet because it is difficult to define, we are often lured to avoid open inquiry as a goal of schooling because inquiry is difficult to measure. Much of

what we know arises from open inquiry yet we often wish to subordinate open inquiry to the learning of fixed conceptions that are more easily understood and more easily tested. Fixed definitions are part of our problem. We account for only what can be easily measured. Quantification leads to easier and more certain measurement. Certainty can prevent imagination and be debilitating for learning.

Most definitions bind and open inquiry is unbound. In a sense we do not know what we are doing when we openly inquire. In another sense, we know what we are doing when we are attempting to find out what we are curious about. As Einstein said about research: "...If we knew what we were doing it wouldn't be called research." When attempting to explore the beginning elements of consciousness, do we start with the definition of consciousness, and/or do we consider human consciousness is what is doing the inquiring and defining? Can both the defining and exploration of what is being defined be done simultaneously?

"Define" means to limit and the limits of consciousness have not yet been clearly explored. Some elements of consciousness may even be unexplorable in the sense that exploring is always conscious. We may run into infinite regress where we explore our exploring of our exploring while we are exploring. What would happen if we did become involved with infinite regress and stopped exploring at an unknown point? We do the starting and stopping almost all the time while awake. Exploring is natural for us as is taking a break from exploring.

"At the root of all power and motion, there is music and rhythm, the play of patterned frequencies against the matrix of time. We know that every particle in the physical universe takes its characteristics from the pitch and pattern and overtones of its particular frequencies, its singing. Before we make music, music makes us. "--*Joachim-Ernst Berendt*

Begley, writing about *How a New Science Reveals Our Extraordinary Potential To Transform Ourselves* (her subtitle), said: “There’s nothing wrong with seeking universal truths of the natural world—hey, it worked for Newton, who realized that the same force kept planets in orbit and pulled objects to the ground. But once social scientists got physics envy, they decided to look for human universals—of behavior, morality, attitudes, mate preferences and the like. Cultural anthropologists were apoplectic, pointing out the huge variety of human cultures and their attendant attitudes and all the rest. This study drives home the message that extrapolating from studies on Western college students—the default group for so much of this research—to the rest of humanity might not be the smartest move.”

Begley’s research about training shows training is necessary for education but the whole of education is more than the sum of the parts of training. She is using the word “training” in ways that generate personal transformation which is what education and Zen are about. (My use of training refers to primarily absorbing information often told by a teacher.)

Both science and art are creations of conscious minds. What may be said about differences between Western consciousness and Eastern consciousness? The ancient Chinese never made a distinction between poetry and philosophy as the early Greeks did. The early Greeks influenced our Western thinking to the point where we now have paradigms which lead us to think that something cannot be, and not be, simultaneously. Psychologists Kaiping Peng, and Richard Nisbett reported in the *American Psychologist*, that their Chinese subjects held that some events could be, and not be, simultaneously, whereas the Western subjects could not and did not so hold. With differences noted by Peng and Nisbett, might we say that Eastern minds, at times, use different paradigms than the Western minds? Is it possible that Western

consciousness is different from Eastern consciousness if frames and paradigms are a part of our consciousness?

As fingerprints are different, so are our brains. Nisbett's book, *The Geography of Thought*, demonstrates thought differences. Westerners are more interested in things/nouns while Easterners are more interested in relations, verbs. Buckminster Fuller's book, *I Am a Verb*, is an example of an enhancement of creativity when Westerners add qualities of Eastern thought. Einstein blended Eastern and Western frames to a point of transcending older, fixed versions of both Western and Eastern thinking. Kincheloe, Steinberg, and Tippins elaborate on the priority of relations for Easterners over that which is related.

Westerners created axiology, the study of value. It is a sub branch of philosophy. Axiology is further divided into aesthetics, the study of beauty, and ethics, the study of what is good. Some problems do not arise for Easterners who never made what some people consider the Western mistake of separating philosophy from poetry. Frames of Eastern thinking, in Nisbett's research, appeared to be more open; less certain than Western Frames. East Asians treat justice more as an art. Westerners treat justice more as a finding of truth through the use of logic.

Einstein thought that a great scientist was a great artist. Einstein also thought the best way to learn what a scientist does, is not to read or listen to what a scientist says, but to notice what he or she does. Perhaps Einstein's brilliance partly arose from his broad thinking which encompassed and transcended Western and Eastern elements.

The mathematician/philosopher, Rene Descartes, cemented dualistic thinking for the West by his excessive need to be certain. Excessive certainty and avoiding ambiguity are cherished by the closed, obedience to authority mindset. While Descartes has had some positive

influence on Western, thinking, his avoidance of ambiguity and excessive rational certainty have toned down Western attempts at developing imaginative intuition and open thinking. Descartes' influence on Westerners today is to keep Westerners more unconscious. This conclusion can't be made utterly clear and easily measured. Westerners need to be excessively certain, and as a result, if some event cannot be clearly measured, that event is not often considered.

This has a lead many teachers and professors to attempt to produce evermore educational institutions at large. Frequently, teachers and professors do not have "love of learning, self-direction, and the development of an imaginative, open mind" as primary goals of their instruction since those goals, while we know what they represent, are difficult to measure with enough certainty for Westerners.

For Westerners, what is important is "what is said." For Easterners, "how what is said" is as important as "what is said." Easterners seem to be more holistic. Westerners have made more scientific advances over the years, but now with our fund of knowledge doubling so rapidly, we may need to be more comprehensive and holistic by blending some Eastern elements of thought into our Western thinking. Some scientific advances, at least since Alfred Nobel, may have been judged to be advances often worthy of Nobel prizes, perhaps because of the super specificity and extra clear measurement involved. These "advances" have led to quantum physics and  $E=mc^2$  which many have difficulty understanding.

The epitome of Eastern thinking, according to some scholars is "clearly" (as much as possible) described by philosopher Abraham Kaplan when he wrote about Zen in his *New World of Philosophy*. When writing about Zen, Kaplan wrote that nonsense cannot be avoided. Nonsense is a "no no" for Westerners yet by adding Eastern elements to our

Western thinking, we may find that more long-range sense may be made when we allow for the possibility, or even likelihood, of some nonsense.

Easterners allow themselves to be more uncertain. Some cherish “not knowing” in that they know there is much more to be known than we now know. (Only relatively recently was found that only 4% of the universe is matter and energy as we know them.) Einstein may have had a glance of the value of not knowing when he said: “Modern Science, when measured against reality, is primitive and childlike.”

Zen is not defined. Zen contributes to defining. It seems that the need for very clear definitions has been a block for Western thought. For instance, if one wants to know what education is, why doesn't one simply go to dictionary? If one used the dictionary definition of education, would one then know when one's teachers and professors were educating one, or is there “more” to education than a dictionary definition?

For Westerners, if we can't define something we might consider ourselves stupid about it. As a result of the great difficulty in communicating about “what is quality in thought and statement,” we rarely consider what is quality in thought and statement. We know that four is a correct answer for the question, what is two plus two. Have we learned, in a quality way, when we know that four is an answer for what is two plus two? Certainly, the ability to manipulate numerical symbols is useful in our daily lives, but it does not tell us how best to live, or how to be self-directing and broad-mindedly, imaginatively open.

When one asks what is Zen, the reply by Inayat Khan is useful. His reply is a story about a young fish going to the queen fish and asking: “I hear there is a sea. What is it, and where is it?” Some Zen masters answer when asked what is Zen, say that Zen is the study of the Self and a way to study the Self is to forget the self. I have heard this statement from a Zen

Master. The capital letters in Self and self may or may not be used. What they imply is not clear. (As one may later see, what is clearly expressed in words is not Zen.)

The young fish is so surrounded and enmeshed by the sea that he does not notice it. The same may be true for people and Zen. The divisions that we make in the West are capable of infinite refinement. As Michael Polanyi said in his book, *Tacit Dimension*: “We can know more than we can tell.” One of the mistakes Westerners make is to think that we can tell what we know.

Einstein’s idea of liberation from the self is something that may be interpreted in many ways. This book will offer a view of Zen as a way of liberating the self, as Einstein suggested, from the self. Zen implies that the way that can be said is not the way. Zen seems to come down a level when placed into words. Zen cannot avoid nonsense in Western terms, but even some of Zen’s nonsense makes some sense.

At the heart of Zen is compassion and nonduality although little mention is made of that here. Einstein did not frequently use the word compassion, but his many ideas show that he was very compassionate, kind and Zen-like. I project that it is compassion and kindness which prompted Einstein to put the good of everyone ahead of his own personal good. There is a strong connection between Einstein’s social thought and Zen.

Lakoff mentions empathy is at the heart of open, liberal thinking while obedience to authority is at the heart of more narrow conservative thinking. Einstein seemed to be empathic.

## IMAGINARY EINSTEIN—LORENTZ LETTERS

Imaginary letters to and from Albert Einstein and H. A. Lorentz (whom Einstein said meant more to him than anyone else) are used here to extend Einstein's ideas about thinking something that can't be learned from textbooks. It is posited that openness is a part of Einstein's social thought including his thought that education is developing the ability to think something that can't be learned from textbooks. Such open Einsteinian thinking may move us closer to greater clarity about an educator's equivalent to a mathematician's zero (an Einsteinian mind opener). While Einstein may agree with some of what is said, it must also be noted that he never alluded to an educator's equivalent to a mathematician's zero or an Einsteinian mind opener. What must continually be kept in mind is the difficulty for any clear, semi-permanent idea of education as process. While this process can't be easily described, this process is similar to generating thinking something that can't be learned from textbooks.

Einstein's ... "thinking something that can't be learned from textbooks," and an educator's equivalent to a mathematician's zero are difficult to express as is David Geoffrey Smith's notion mentioned in his *Pedagon*:

"What is the silence that comes over an audience after a fine poetry reading, a well played piece of music or a superb dramatization? If we describe the performance as 'brilliant,' we indicate our sense of something shining through the ordinary routine of things. But even more important is the effect of the performance on us - -what it calls forth in our deep experience. The silence which reigns after the playing of the last note may be understood as a

sign of our being ‘taken up by’ that which has just been given into a new way of self-understanding, and a new way of being together.”<sup>1</sup>

These imaginary letters to and from Einstein and Lorentz hopefully will shed some light on the differences and nuances between that which can be easily expressed, and that which may not be clearly expressible. As was earlier mentioned, Lao Tzu said: “The way that can be said is not the way.” Zen follows that. Einstein thought science was seen as primitive and childlike when measured against reality perhaps because what is expressible is so minute compared to the unexpressed, and maybe un-expressible reality.

Imaginary letter from H.A. Lorentz

Dear Albert,

My advice to students regarding becoming educated today is that they should choose their teachers and professors rather than particular courses or even subjects. This is not true for courses which primarily “train.” The differences between quality teachers and unqualified copycats, is enormous for becoming educated.

I know you had little use for teachers and professors who would speak about things, events, and ideas that could be easily found in textbooks. Too many teachers and professors train rather than educate. I have found value in noting that “training” relates to specific skill building and “educating” relates to the general skill of putting specific skills to use so as to facilitate open self-direction and the ability to think something that can’t be learned from textbooks. I’ve noticed self-direction is facilitated when, as David G. Smith says we are taken

up; at times it may be an aha!-type of experience, which cannot be fully expressed. I know you notice one has more power when one's courses are more involved with "educating" than with "training" even though one can't be "educated" without some "training." It is useful to notice there is learning which "educates" and a lesser variety which "trains." I also know you understand excessive "training" can inhibit education/self-direction, and inhibit thinking something that can't be learned from textbooks.

I have found "education/self-direction" hones my judgment and allows me to move to the threshold of my mind (where I wonder and openly inquire). As I become more "educated" I can more easily choose to be "trained" in a high quality way. Without being "educated," I would not know what is quality, and I would continue to be obedient to authority which may be considered as being a slave to the governmental-industrial complex. I would then not know what is quality in thought and statement until others told me.

We must, however, continually be open. When closed, we find as Begley reports: "Scientists are supposed to change their minds when evidence undercuts their views. Dream on.... Rare, however are changes of mind by scientists identified with either side of a contentious issue...proponents of a particular viewpoint, especially if their reputation is based on the accuracy of that viewpoint, cling to it like a shipwrecked man to flotsam. Studies that undermine that position they say, are fatally flawed."

A sign of an "educated" person is one who knows without needing someone else to tell one, one knows. Teachers and professors who "educate" often do experiential activities such as Socratic questioning, open inquiry, and they rarely dominate class discussion. As you may recall, Hermann Heidegger thought education was allowing people to learn, implying that

teachers and professors could profitably get out of a student's way while providing conditions for students deciding for themselves.

I also agree that other valuable events will not be known when one is primarily trained, rather than primarily educated. Events such as those mentioned by psychologist James Guinan are difficult to "tell" how to do, but one can learn to do them. Guinan's twelve events are often practiced by those who know quality without being told (those who are "educated/self-directing"). At times when some of these behaviors are done, one is taken up and may even have a new sense of self as David Geoffrey Smith suggests. These behaviors are:

1. Increase the tendency to let things happen rather than make things happen.
2. Have frequent attacks of smiling.
3. Have feelings of being connected with others and nature.
4. Have frequent, almost overwhelming, episodes of appreciation.
5. Have the tendency to think and act spontaneously, rather than from fears based on past experiences.
6. Have an unmistakable ability to enjoy each moment, and to make the best out of each experience.
7. Lose the ability to worry.
8. Lose interest in conflict.
9. Lose interest in interpreting the actions of others.
10. Lose interest in judging others.
11. Lose interest in judging self.

12. Be compassionate to self and others without expecting anything in return.

About stem behavior 1, Steven Rechtschaffen says: “Every single moment has a particular rhythm to it, and we have the capacity to expand or contract an individual moment as appropriate. One way to shift what's going on in our world is not to try to rush to do more, but to allow ourselves to go deeper into that moment of being present. Our ability to shift gears, to shift our rhythm to meet that moment and be present in it, is what allows us to experience the fullness of life.”

Albert, please note what Nipun Mehta said of our distracting age. “We live in the age of distraction. Yet one of life's sharpest paradoxes is that our brightest future hinges on our ability to pay attention to the present. Living in the moment -- also called mindfulness -- is a state of active, open, intentional attention on the present. Mindfulness involves being with your thoughts as they are, neither grasping at them nor pushing them away. Instead of letting your life go by without living it, you awaken to experience. Research confirms the benefits: it reduces stress, boosts immune functioning, reduces chronic pain, lowers blood pressure, and helps patients cope with cancer. Mindful people are happier, more exuberant, more empathetic, and more secure.”

Students often ask questions such as: "Is this going to be on the test?" "How many pages do I have to write?" Students, as opposed to learners, are more interested in a grade and a degree than in becoming educated. If students ask those kinds of questions today they are often following the crowd (schools have “trained” most students to ask those kinds of questions). Students today often do not notice they are asking those kinds of questions while neglecting powerful questions which lead to powerful learning. They also often do not notice there is more to their being a “learner” than being a “student.”

Students primarily seek grades and degrees rather than learning/self-direction). Because it is so common, students do not frequently notice school and university emphasis has been on their being trained rather than being educated to become self-directing. When students are self-directing, they know without a teacher telling them they know. When a student is primarily trained, students will continue to need others to tell them what to know and how to know it.

Who does not want to be free? When one is not free, it is helpful for one to ask: Who binds me? Frequently, educated people will notice that when they are not free, they are the ones who are binding themselves. A person who is primarily trained, will blame others or events outside of themselves for constraints they experience. I have noticed some primarily-trained-people who actually seek constraints in an unaware way.

You may be wondering whether anything useful may be said about difficult to define events. Difficult to define events such as “open, awareness, mind opening, inquiry, self-direction” are often not given attention in school and university classes because of the common belief that there is too much “material to be covered” to spend time on difficult to define events. After studying awareness, mind opening, and self-direction for many years, I am convinced that forcing students to cover content (training) can prevent the occurrence of mind opening. In fact, forced learning can be an element of mind closing. (Choosing to be trained, however, can help one become self-directing.)

Adolph Hitler, Osama bin Laden, and Saddam Hussein, were primarily trained since they showed little evidence of being educated. People in organizations such as the Ku Klux Klan, and The Insurgent Group also show little evidence of being educated. If one notices one is primarily “trained,” that awareness can be an enormous step in one’s becoming educated.

Most of us would probably like to see someone develop an educator's equivalent to the mathematician's zero. I hope our shared wonderings continue to peel away what may be like the skin of an onion when it comes to uncovering what that educator's zero may be. Could an educator's zero relate to Rachel Naomi Remen's comment: "Healing may not be so much about getting better, as about letting go of everything that isn't you - all of the expectations, all of the beliefs and becoming who you are."

Albert, I look forward to chatting with you again soon.

H. A..

Connected to these ideas on educating and open inquiry, Margaret Wheatly said:

"Very little about the emerging nature of life supports who we have tried to be. Life invites us to play along, discovering as we go. Life wants to work with us in surprising ways. We could make our lives so much more interesting, and develop so many new capacities, if we sought to work with the unknowns of emergence, rather than try and plan surprise out of our lives."

"What do we do with surprise? What do we do with a world which cannot be known until it is in the process of discovering itself? It requires constant awareness, being present, being vigilant for the newly visible. We need to notice things we weren't looking for, things we didn't know would be important, influence we hadn't thought of, behaviors we couldn't predict."

“An emergent world invites us to use our most human of all capacities, our consciousness. It asks us to be alert in the moment for what is unfolding. What is happening at this moment? What can we do because of what we just did?”

Gerd Gigerenzer’s research supports an emergent world and surprises us with discovery (as reported by Nipun Mehta.) This report follows much of what Einstein thought about intuition.

“Q. Some of your critics say that gut instincts just aren’t scientific. What’s your answer?”

**A:** We study these things, where intuition is good and where it’s not. One should also not overlook that in science itself, you need intuitions. All successful research scientists function, to a degree, on gut instincts. They must make leaps, whether they have all the data or not. And at a certain moment, having the data doesn’t help them, but they still must know what to do. That’s when instinct comes in.

Q .Where can gut instincts fail?

**A:** Here’s an example: after 9/11, many Americans stopped traveling in airplanes and drove on highways instead. I looked at the data, and it turned out that in the year after the attacks, highway fatalities increased by an estimated 1,500 people. They had listened to their fear, and so more died on the road. These kinds of fatalities are easily avoided. But psychology is not taken very seriously by governments. Most of the research about how to combat terrorism is about technology and bureaucracy — homeland security. In this case, educating the public about their own gut reactions could have saved lives.

**Q:** Do you think of yourself as intuitive or rational?

**A:** Both. In my scientific work, I have hunches. I can’t explain always why I think a certain path is the right way, but I need to trust it and go ahead. I also have the ability to check these

hunches and find out what they are about. That's the science part. Now, in private life, I rely on instinct. For instance, when I first met my wife, I didn't do computations. Nor did she."

Gigerenzer seems to be his own authority. As you may note from what follows, Einstein was his own authority and implied that each of us could profitably become our own authority while realizing that we are living with and among others who are their own authority.

Einstein said: "There are moments when one feels free from one's own identification with human limitations and inadequacies. At such moments one imagines that one stands on some spot of a small planet, gazing in amazement at the cold yet profoundly moving beauty of the eternal, the unfathomable; life and death flow into one, and there is neither evolution nor destiny; only Being."

As David Steindler-Rast said: "An emergent world welcomes us in as conscious participants and surprises us with discovery. To recognize that everything is surprising is the first step toward recognizing that everything is a gift. Our plans are nothing compared to what the world so willingly gives us."

## Chapter 3

### INITIAL CONDITIONS

Chaos researchers found that initial conditions were most important in an accurate portrayal of order. Weather reports that carried weather predictions to eight decimal places were noticeably different than predictions that were based on four decimal places. Education, schooling, and learning clearly deal with consciousness. Attempts to look at the beginnings of consciousness may help us better see the farther reaches of consciousness. Since decimals and all ideas were created by imaginative consciousness, how to best study consciousness is somewhat unclear. Learning to forget trivia may at times be as important as gaining knowledge.

The ancient Chinese kept philosophy and poetry united but that too may be excessively risky for Westerners as would mentioning that some ancient Chinese “non-intellectualizers” made no consequential distinctions. Certainly they made a distinction between their hands and their feet, but to them, such distinctions were temporarily practical. Some ancient thinkers, such as Lao Tzu, thought that anything anyone said may be an expedient to help one be more aware of one’s present experience. As a result of more awareness, more peace and harmony arise.

To explore the further limits of consciousness we can look at what Western paradigms say is unacceptable. What is unacceptable under Western paradigms is Lao Tzu’s idea of what can be said is not the way. Other excessive risks are those that would ask us to intellectually deal

with “emptiness.” Are paradigms stretched when we note some powerful views of education, such as John Dewey’s idea: “Education is the continuous reconstruction of experience?” The noticing of everything being the logical equivalent of nothing (no separate thing—*mu* in Japanese) is unacceptable for Westerners since, under such a far-shifted paradigm, “everyone” would be the equivalent of “no one.” For now at least, those paradigms which accept such strange statements must be placed on a “use only in an emergency” shelf.

But as growth curves are now rapidly approaching a singularity (as in Kurzweil’s, *A Singularity Is Near*—world growth curves come together so that no one knows anything) might it be useful to consider that we now have some type of emergency?

(Imaginary letter from Einstein)

Dear H.A.,

I am still wondering about the idea of allowing things to happen rather than making them happen. As I simultaneously wonder about conditions necessary for the creation of an educator’s zero, I’m guessing that allowing events to happen makes events more peaceful and harmonious. I also wonder whether everything we do, say, be, or become is not part of the nature’s plan” for us to be more peaceful and harmonious.

This wondering makes me a further wonder about tentative knowing. If students today are like most of us, they occasionally did something they later regretted, and later thought they did it because they didn’t know any better. Some of the things we do put us in chains. As the

Eagles said: "So often in time it happens, we all live our life in chains, and we never even know we have the key."

Remember the old story of a farmer whose horse ran away, and his neighbor came to him and said: "Oh you poor man, your horse ran away." The farmer seems to agree with John Keats who said: "The only means of strengthening one's intellect is to make up one's mind about nothing—to let the mind be a thoroughfare for all thoughts." I think it is helpful when people notice education is a not totally definable process. It is possible there are as many kinds of knowing as there are knowers. I don't know whether one needs to be well versed in ordinary knowing before tentative knowing operates.

What kind of knowing does it take to consider an unknown person who said: "All the delightful things of the world -- -- sweet sounds, lovely forms, all the pleasant tastes and touches and thoughts -- -- these are all agreed to bring happiness if they are not grasped and possessed. But if you regard them merely as pleasures for your own use, and satisfaction and do not see them as passing wonders, they will bring suffering."

Marshall McLuhan said: "The methods of our time is to use not a single but multiple models for exploration –the technique of the suspended judgment is the discovery of the 20<sup>th</sup> century as the technique of invention was the discovery of the 19<sup>th</sup>." The Medium Is the Message.

We all know what temporary means until we are asked to define it. I am not asking for students to define temporary but I ask: What is not a passing wonder? One's knowing anything may be a passing wonder. There are many ways of knowing. Are other kinds of knowing other ways to live? There may be many ways to the way. Mohandas Gandhi said: "There is no way to peace. Peace is the way." As Robert Fulghum remarked: "Peace is not

something you wish for; it's something you make, something you do, something you are, and something you give away.” Peace, as the idea of a set in mathematics, cannot be explained in terms of a simpler idea. Peace is so simple and evident that when it is present, it does not need a verbal description.

As Lakoff says in *The Political Mind*: (Walter Bryce Ghali reports in his paper “Essentially Contested Concepts:”) “...concepts like democracy and art are meaningful, but will never have fixed meanings. They have agreed-upon central cases. But because the central cases have a complex structure and involve values, and because different people have different values, those values will necessarily extend the concepts in different directions. As a result, people will always be contesting the meanings of ‘democracy’...because their values will always be different. The conclusion: the meanings of such concepts cannot be absolutely fixed” Education is similar. Training often is not.

My idea of liberating oneself from a separate self also cannot be absolutely fixed nor can education, self-direction, loving learning, awareness, and open inquiry.

Are there different intelligences for other kinds of knowing? David Caruso said: “It is very important to understand that emotional intelligence is not the opposite of intelligence, it is not the triumph of heart over head -- it is the unique intersection of both.” Each of us intersects differently and in that sense, we each know differently and have different passing wonders.

So when wanting to know, as John Lubbock says: “What we see depends mainly on what we look for.” Ancient and contemporary wise women and men have often held “that which we are looking for is that which is looking.” I didn’t know any better when I looked for great things to do for others and myself while, as a wise person said, “Not seeing that numerous small opportunities to help others and myself continually surrounded me.” Might those small

opportunities surround each of us? Samuel Butler said: "Every man's work, whether it be literature or music or pictures or architecture or anything else, is always a portrait of himself."

The following quote illustrates a kind of realization? "A mathematician, a biologist, and a physicist are sitting in a street café watching people go in and come out of the house on the other side of the street. First they see two people going into the house. Time passes. After while they notice three persons coming out of the house. The physicist said 'the measurement was inaccurate.' The biologist concludes: 'they have reproduced.' The mathematician's said: 'now if another person enters the house, it will be empty again.'"

One of the better insights I stumbled upon was realizing that, at times, I think I know when I don't. Knowing that I don't know has been very helpful for me, and the uncertainty that accompanies knowing that I don't know is something that one can get used to in a calming and peaceful way when one is patient. One thing I have not yet learned is to be patient about becoming patient. Perhaps there is no way to patience. Patience is the way. A wise person said: "Infinite patience brings immediate rewards." As I write these words H.A., I can't help but think that you would agree with much of what I have said here.

Cordially,

Albert

#### TIP-TOEING AROUND CONSCIOUSNESS

I know of no more encouraging fact than the unquestionable ability of man to elevate his life by conscious endeavor. --Henry David Thoreau

A phase transition (in physics) is an abrupt and sudden large-scale transformation arising from several or many much smaller changes. Is a phase transition of some type needed for consciousness to appear? Do we need another phase transition of consciousness to move to a level more in tune with technological advances recently made and soon to be made? The whole of a phase transition in physics, or the whole of a temporary mental restructuring (as when one gets a joke), or the whole of a more permanent mental restructuring (as when one gains an insight, or experiences an epiphany, or some sort of aha!) is a whole which can only be noticed before it is dissected into parts. The whole, being more than the sum of the parts, includes a distinctive arrangement of the parts which cannot be seen when the whole is dissected. Take a few hundred larger parts of one car, scatter them randomly and then attempt to see “a car.” Einstein saw wholes including the whole of all people and things. These wholes were cherished by Einstein and Zen practitioners as you shall see.

What follows includes a look at what may happen when scientists are more interested in explanations than in noticing unusually large events (very large wholes). Some ideas held with certainty may prevent one from being open to seeing broader connections (larger wholes). What may happen when noticing unusually large wholes is that explanation may be unlikely and perhaps even less important than noticing the event which may, or may not later possibly be described or explained? Scientists have been very successful when explaining parts (even large parts) but the arrangement of all the parts cannot be seen when looking at disordered parts. M theory seems to imply that everything (all phenomena, everywhere) can be explained in terms of vibrating strings or membranes of strings. If “explaining” is part of everything, as with Kurt Gödel's incompleteness theorem, any explanation would be

incomplete when infinite regress is present (the explaining itself needs to be continually explained).

We can however, notice all of what we presently notice as a whole, or a whole minus some not yet connected parts. From a holistic frame of reference, each part is at least interconnected with every other part. To notice the arrangement of the parts we need to see the whole. The history of science shows that an explanation of an event is only powerful until a better explanation arises. An event cannot be explained until it is noticed. Some events may not be noticed when they cannot be explained, and if that is the case, noticing an event is more primary than its explanation.

What is required of a view which holds that "more" may be said about any event including events which attempt to explain all events? It is not that more may not be said about string theory or "membranes" as large as the universe, it is that Gödel's incompleteness theorem applies and infinite regress arises when one attempts to explain a final explanation, if indeed the phenomenon of explaining is part of all phenomena. Is it agreed that there is no narrative that explains all narratives?

Einstein included all matter and energy in  $E= mc^2$ . His cosmological constant/fudge factor is thought to be accurate even though Einstein later thought it was a mistake. What may be said about Gottfried Leibnitz and Isaac Newton creating a variable (an infinitesimal; an amount too small to measure to assist in calculating)? (Does the simultaneous inventing of calculus imply a Tielhard de Chardin noosphere?) Can we invent a variable the opposite of an infinitesimal; an amount too large to measure to help notice an almost unimaginably large whole which can't be explained in terms of simpler ideas, as a set in mathematics can't be explained in terms of a simpler idea?

Susan Greenfield, a professor of pharmacology at Oxford University, states: "... the mind is rooted in the physical connections between neurons... consciousness is an emergent property of the brain, similar to "wetness" of water or the "transparency" of glass both of which are properties that are the result of -- -- that is, they emerge from -- -- the actions of individual molecules... Part of the mystery and excitement about consciousness is that scientists don't know what form the final answer will take." The proposed notion of a final form may be unformable and unknowable if "more" may always be included.

Einstein's statement: "People like us, who believe in physics, know that the distinction between past, present, and future is only a stubbornly persistent illusion," helps us conclude past, present, and future are a unit as is space/time a unit. As we look at Feynman's notion (there is no identifiable "now" in physics) consider that no final form may be knowable ("more" may always be said—there is no one number which accounts for all numbers). Does this imply that "not knowing" always goes with knowing? As G.K. Chesterton said: "You can only find truth with logic if you have already found truth without it."

A theory of everything includes quantum mechanics. Quantum mechanics involves quanta. A very large whole (created with the assistance of a not yet formulated, non-infinitesimal/non-quantum non-mechanics) may use what could be, for now, left unnamed. Quanta are the smallest particles. Non quanta may be the largest whole event toward which we may allude. Non quanta may be so large it can't be said even though speech may tip-toe around such a large whole.

I'm reminded of "the fish story" where someone said he caught a fish so big that he needed two cameras to take a picture of it. As we created a variable, an infinitesimal, an amount too small to measure, might we create a variable too large to measure? That too large to measure

implies there is no mental tool large enough to contain it. It would contain all contents. Would it also be the former of all forms? We may later notice Zen and Einstein's thought applies to this.

Quantum physics united disparate parts to explain the behavior of super small physical events. Might something like non-quantum non-mechanics be an attempt to move towards uncovering a whole which is more than the sum of the parts? The arrangement of the parts is itself an element that cannot be seen apart from the whole. The arrangement of the parts cannot be simultaneously stated when the separate parts are disunited.

We can know more than we can tell as per Michael Polanyi's demonstration that we can know when one has a puzzled expression, but we cannot simultaneously describe or explain in detail, the facial configurations which comprise the puzzlement. We may be able to identify "now" in the sense of Einstein's unification of past, present, and future, but may separating time from space create blocks to understanding? (Might super-string theory's 11 dimensions allow for a unity with a simultaneous separation?)

Physicist, David Bohm, speaks of the implicate order and the explicate order. Nolan elaborates on Bohm saying: "The implicate order is the creative vacuum, the universe's unbroken wholeness, which is invisible because it is not available for our senses. The explicate order is the multiplicity and diversity of things and events that arise out of the implicate order and present themselves to us as empirical evidence." Bohm's implicate order may be similar to a non quantum non mechanics whole. How does the implicate order relate to the not-yet-discovered Higgs boson?

Explanation implies accurate explanation or it is no explanation. If 96% of our universe is not now known (dark matter and dark energy) can we be accurate with any explanation of

very large events? What else might scientists do with their time if they didn't gather data and explain? Description often precedes explanation so scientists could notice and describe. When describing very large wholes, the largest whole may be conceived as the universe (maybe as one of many possible universes). Do we need to know shifting paradigms to consider if each part of the universe is interconnected; might the description of universe be similar to one describing one's self as a part of a hologram reflects the whole? Some people, perhaps after much thought and experience, define themselves as “no one, going nowhere.” That too appears to be a conclusion too risky for current paradigms, but with paradigm shifting, who knows? Some Zen practitioners approach being no one, going nowhere (which includes not knowing in an intellectual sense).

David Chalmers, Australian National University said: ...“Consciousness is an irreducible aspect of the universe, like space and time and mass.” Chalmers discussion generates wonder. Because of the subjective nature of consciousness and because multiple sensations may lead to a seamless whole, would thinking that all attempts to explain and understand consciousness relate to an implicate order? When exploring the implicate order (not available to our senses) might such exploring be similar to “that which we are looking for is that which is looking?” Can we know more than we can tell?

(imaginary letter from H. A. Lorentz )

Dear Albert,

In order to accomplish some of the events we have been talking about, I think students need freedom and trust. Carol Ann Raphael reported: ...”more than sixty percent of first-year students entering over 230 U.S. institutions of higher learning said they hoped to have an opportunity to develop their personal values, self-understanding, and maturity while at college.” Those characteristics may not be learned without trust and freedom.

Other than courses which train for development of clearly defined specific skills, courses that develop open, self-directing, behavior allow students to decide for themselves how to spend their time? For courses designed to primarily “train,” high degrees of freedom may not work, but for courses which purport to be educational, freedom is crucial. Freedom implies trust. In “free schools” students determine what, when, how and where they do what they do. Free schools trust students.

Most schools and universities assume students will not learn what they are “supposed to learn” if students choose for themselves. Consequently, most students are constrained by schools and universities. The student constraints are subtle and have been with us for so many years we don't even notice. Our earlier schooling has even trained us to want some school constraints and to distrust what might be holistically trusted.

Students at free schools, like the Brooklyn Free School, are unconstrained and they believe that “the fundamental premises of the school are simple: that all people are curious by nature; that the most efficient, long-lasting, and profound learning takes place when started and pursued by the learner; that all people are creative if they are allowed to develop their unique talents; ... and that freedom is essential to the development of personal responsibility.”

At The Brooklyn Free School (and at least at one time at Cal Tech) students create their own environments and generate their own activities. Buildings, faculty and the equipment are

there for the students to use. Students are independent and are trusted. (Cal Tech allowed students to follow their muse.) The students in free schools are treated as responsible people in what seems to be a community of participatory democracy. Each person (students and staff) have the same power with their vote for rules for the school.

“Education” helps a student become more self-directing. While it is very difficult to be educated without a variety of skills, a student will not be educated (self-directing) if they do not have the general ability (more than a clear set of skills) to decide for themselves. People learn to decide for themselves by deciding for themselves. Free schools trust students to decide for themselves.

Courses which primarily train for specific skills often require students to remember much information, Remembering separate pieces of information is the lowest of six cognitive levels yet most teachers and professors require students to remember pieces of information. Assessment of Educational Progress has designed its 2009 science test to include application of scientific knowledge. The application level is the third lowest level in Bloom’s Taxonomy of Educational Objectives. The analysis, synthesis, and evaluation levels are three higher levels which outdated school mindsets do not often deal with because of the excessive need for quantifiable measurement. Education often occurs at the higher three levels while training often occurs at the lower three. The lower three operate when student are free to study what is remarkable, interesting, and important to them, as do the higher three.

You have heard: “He who is his own medical doctor has a fool for a patient.” But people like you, Albert, would probably agree with: He who is his own educator is on the road to wisdom. When students choose open teachers and professors who trust more and grant more freedom, students help educate themselves.

I hope to see you again soon Albert.

Your friend, H.A

## Chapter 4

### BEGINNINGS

Percy Bridgeman, Nobel laureate, said: “Science is nothing more than doing your damnedest with your mind, no holds barred.” Most educators don't consider whether their students do their damnedest with their minds. Of an almost infinite number of places to start doing one's damnedest with one's mind, let us start with an idea of Immanuel Kant: “Thus the order and regularity in the appearances, which we entitle nature, we ourselves introduce.” (*Critique of Pure Reason*, A125).

As mentioned by Thomas S. Kuhn: scientific advance is determined by social change rather than impersonal reason. Begley says: “But as fast as scientists with an intellectual stake in a particular side of the debate tend to see flaws in studies that undercut their clearly held views, and to interpret and even ignore ‘facts’ to fit their views. No wonder the historian Thomas Kuhn concluded almost 50 years ago that a scientific paradigm topples only when the last of its powerful adherents dies....Physicist Marcello Gleiser of Dartmouth breaks ranks with almost every physicist since Einstein, and with his own younger self, and now doubting that the laws of nature can be unified in a single elegant formation. Unification may be aesthetically appealing, but it's not how nature works.”

Kant's and Kuhn's ideas, coupled with Michel Foucault's notion: “We can resist the image conferred upon us by the controlling order and so forge new ways of living,” is a start to consider paradigm shifting and new hypotheses formation related to learning. It is

hypothesized that a more open process of paradigm formation may help schools and society forge new ways of fostering learning so that more people, more often, can do their damndest with their mind. How do paradigms relate to one's doing one's damndest with one's mind, no holds barred?

This writing does not offer a new paradigm but rather attempts to elaborate on the notion that new paradigms are difficult to form without openness to what was previously semi-unthinkable. Semi-unthinkable notions are not logical impossibilities such as square circles. Quasi-unthinkable notions are unthinkable within old and more rigid paradigms. Around the time of Copernicus, it was unthinkable that the earth was not the center of the known universe. Doing one's damndest with one's mind is difficult without mind-opening. Mind-opening helps one consider rare qualities and partially unknown quantities, permits the semi-thinkable notions to help open one's mind to the possibility of new paradigms. New paradigms allow for new hypotheses which may generate new ways of knowing.

Education is mind-opening or it is not education. To restate Butler-Bowdon when he spoke of what Jiddu Krishmurti who said:

“The purpose of education is not to prepare us for jobs but to help us understand the whole process of life. Education is about how to love, how to live simply, how to free our mind from prejudice, superstition, and fear. Without this knowledge we will walk through life in an almost mechanical way, instead of becoming the truly creative person we could be.” Most of schooling is now job training rather than the development of openness and self-direction. .

Dear H.A.,

Don't you think many of us would agree we need balance in most areas of our lives. This is especially true for civilized societies. Even in the United States, I suggest that schools and universities have become unbalanced favoring "training" while neglecting "educating." Students are often more interested in a grade than in being educated. Those who are trained rather than educated will often ask: "Will this be on the test?" Or, "How many pages do I have to write." When you are interested in becoming educated, your questions are greater in number and those questions deal with what is puzzling you, paradoxes, and events that confuse you.

A student's present and future wellbeing may depend on the student's noticing whether her courses are primarily "training" or primarily "educating". Being uneducated (primarily trained) generates ignorance, creates present day slaves, and leads to fascism.

In order to bring better balance I would like to note that a brilliant educator, Kahlil Gibran, said: "No teacher can reveal to another anything but that which already lies half asleep in the dawning of a student's knowledge." That great teacher also said a teacher "gives not of his wisdom, but rather of his faith and his lovingness." That faith and lovingness may be evinced by Socratic questioning and other experiential mind-opening strategies.

Kahlil Gibran also said: "If he (the teacher) "is indeed wise he does not bid you enter the house of wisdom, but rather leads you to the threshold of your own mind. ...The astronomer may speak to you of his understanding of space, but he cannot give you his understanding. The musician may sing to you of the rhythm which is in all space, but he

cannot give you the ear which arrests the rhythm nor the voice that echoes it. And he who is versed in the science of numbers can tell of the regions of weight and measure, but he cannot conduct you thither. For the vision of one man lends not its wings to another man.”

I think you, H.A., and John Dewey, the great American philosopher, would agree with these thoughts of Kahlil Gibran. Gibran, and Dewey are talking about “education” rather than only “training.” It seems to me that well over half of all teachers and professors hold that training equals education. When you are primarily trained, you will not know until some authority tells you. “Putting things together” will be difficult with training. Training is a part of education but education in the sense of becoming more self-directing and open-minded is missed when training is primarily given. When I see you next week I hope to discuss these matters with you in greater detail.

Remember it is expertly predicted that by 2024 our fund of knowledge will be doubling every 17 days. If that is the case, I think it would be best for students to develop their ability to decide for themselves what information they will need, when they will need it, and how best to get and use it. How the information may be used in 20 years is difficult to tell now but we can make some good guesses. Education, as opposed to training, better provides open-minded, imaginatively intuitive self-direction.

When students are primarily trained, they continue to need experts to tell them what to do and how to do it. Gibran’s idea of good teaching leading a student to the threshold of the student’s mind, is educating/mind-opening. Self-directing behavior and mind-opening go with education but they are often not involved when training (dispensing information) is primary.

Gibran’s vision of teaching is not often practiced when a teacher is primarily training. When more people notice how much students are being trained and how much “education” is

being neglected in classrooms, they will see the great cost. Citizens may then decide to do something quickly about it.

Cordially,

Albert

### CONDITIONS FOR NOTICING

What can be done about breaking open and breaking through? Some of what we wonder about can be tested. Some of what we wonder about may be testable only with not-yet-developed paradigms which may include new notions of testing and hypothesis formation. What appears to be silly or nonsensical may not be testable within the framework of our current paradigms and mindsets. Before new paradigms emerge might it be helpful to begin to form some hypotheses, or provide conditions whereby previously silly or nonsensical hypotheses may be tested?

Remember The British scientist, J.B.S. Haldane's: "The universe may be stranger than we can suppose," is confirmed by Todd May, the Lemon/ Calhoun Chair of Philosophy, Clemson University. May says: "Consider the possibility that there is more to our world than we can perceive, and more than we can conceive. Suppose the world overflows the categories of representation that the dogmatic image of thought imposes on it. This is not to say that our particular categories are lacking something that other, better categories would give us. Our

imagination must go further than that. We need to consider the possibility that the world -- -- or, since the concept of world is too narrow, things or being or what there is -- -- outruns any categories we might seek to use to capture it.” New paradigms may sharpen imagination.

We create categories within present, sometimes very old, paradigms. As some have been looking for the educator’s equivalent to the mathematician’s zero, might we also wonder about what may be the mental equivalent of dark matter and dark energy? What Einstein thought may have been his biggest mistake, his cosmological constant (his fudge factor) now seems to be an accurate prediction to help explain why galaxies are moving away from each other rapidly. Is that connected to the newly discovered “flow?”

Some physicists are now discrediting string theories and M theory since those theories cannot be falsified. Karl Popper proclaimed that something that cannot be falsified is meaningless. Time, now, openness, self-direction and other events which many know exist apparently cannot be falsified. Effective verification is done through the possibility of falsification yet the falsification principle itself cannot be falsified. Is it too early to ask whether it is better not to know, than to know wrongly?

An unknown mathematician said: “We ordinarily see the world as if all physical form is greater than nothing and tend not to envision the world as if it is less than an infinite whole. Yet it is possible to conceptualize the observed world in either way, as more than nothing, or less than everything. Mathematics, however, cannot make that switch because there is no number that can represent the whole of all numbers. This is because all ordinary mathematical values are defined relative to the nothing of zero. What follows is a way of seeing the physical universe mathematically as less than everything, rather than more than a nothing. In our

ordinary mathematical system, nothing is a foundational axiom. In this newly discovered mathematical system the idea of nothing has no place or meaning.”

These seemingly strange statements and the possibility that what exists is more than can be perceived is worth mentioning partly because wondering is itself harnessed by common paradigms. “If at first the idea is not absurd, then there is no hope for it.” Einstein, (Quoted in Des MacHale, *Wisdom* (London, 2002). What we wonder about seems to be influenced by language in that we frequently don’t wonder about tautological events such as whether or not red is red. Who wants to be thought of as foolish? Scientific journals do not often publish general silliness and foolish notions, nor do they publish what is not considered informative or illuminating.

Wondering at the farther reaches of wonder often seems nonsensical. Many events one can wonder about as a possibility may sound foolish and strange. For example, is it foolish to wonder whether there may be a mental equivalent to dark matter and dark energy. May it be useful to wonder if that possible mental equivalent to dark matter and dark energy may possibly help us move in the direction of being much more tentative about what we know. The limits of tentativeness approach “not knowing.” Under what conditions would it be best for more people “not to know?” We can notice absence when an event was previously present, but we cannot know the thought of “no thought” as we cannot conceptualize “not thinking.” We can’t intellectualize non-intellectualizing yet, at times, non-intellectualizing may be in order.

One could wonder whether “break opens” and “breakthroughs” arise from that which, at first glance, appears to be silly or nonsensical wonderings. What we wonder about may often not be absurd because of our felt need to follow “acceptable” paradigms to avoid foolishness,

rejection, and nonsense. Under what conditions is it difficult to avoid the possibility of nonsense? Do we need to go beyond the boundaries of acceptable thought - - a thought too far - - in order to note the boundaries of "making sense?" What follows are some infrequently considered notions which at first glance appear nonsensical since they are infrequently considered. In order to explore appropriate boundaries, it is suggested we look nearer the edges of appropriate thought, perhaps going beyond appropriate thought, at times, to help us know what would be more appropriate for a rapidly changing society. Begley reports: "Altruism and its cousin, generosity, seem to reflect less on who you are than what you see."

Anais Nin is repeated several times: "We don't see things as they are. We see things as we are."

Dear Albert,

I know you know openness to receive precedes attention. And you know that words don't mean by themselves; we mean by their use. Information often has little meaning by itself, but rather, we give it meaning by its use. The usual "professor-telling" courses often emphasize giving students information. Mind-opening type courses (high quality teaching) provide conditions whereby students not only embrace interesting information, but also learn to think something that can't be learned from textbooks (or most lectures).

Openness to receive can better help one notice a powerful distinction between "inquiry teaching" and ordinary teacher or professor-telling. "Learning to think something that can't be learned from textbooks" is what you thought was the purpose of a liberal education. What I call the Einsteinian mind-opening-type courses provide conditions whereby students put together and use information in a honed-judgment way.

Ordinary professing gives more attention to training of specific, clearly defined skills. Inquiry teaching, where broad learning and development of self-direction are primary goals, gives more time to the difficult-to-define integration and quality use of specific skills. This integration of skills generates increased deciding for oneself what will secure or endanger one's freedom.

Both "inquiry" and "telling" courses require students to pay attention. At the heart of attention is "openness to receive" - receptivity. Students are more open to receive what is remarkable, interesting and important to them. Increasing trust and freedom in students is promoted with infrequently used "mind-opening" facilitated by openness to receive. Inquiry teaching activities can now provide conditions for increased student openness and self-direction. Student freedom and trust are urgently needed for as many as 90% of our students.

Courses which primarily "train" have dominated schools and universities, so don't be alarmed if students don't think as independently as you would like. Don't be surprised if students mainly pay attention to what others tell them will be on the "the test." Education includes training but is much broader. "Telling-type teaching" often interferes with education unless the stated goal is to train. Students can learn to openly inquire with freedom.

Providing higher degrees of trust and freedom for students has only been given lip service. Much more student trust and freedom encourages students to explore what is remarkable, interesting and important for them. When students freely explore, their openness to receive increases, as does their trust for their teachers and professors. Higher degrees of openness to receive will be needed by students in order to prepare for a period of unusual change. Ray Kurzweil predicts vast technological change in this century. Schools and universities seem to

not be keeping up with that change. As Peter Drucker said: “Knowledge has to be improved, challenged, and increased constantly, or it vanishes.”

In order to more readily adapt to rapid change, mind openers are unusually helpful. Mind openers are fostered by student receptivity. Remembering disconnected pieces of information uses the lowest level of cognitive brain function, yet many teachers and professors primarily require remembering separate pieces of information.

Openness to receive precedes attention. Because openness to receive is most basic, it is infrequently considered. Openness to receive generates self-direction. Openness to receive and attention are one whole in that each generates the other within a holistic framework. Intention to attend is a part of this whole. In providing conditions such as facilitating high degrees of trust and freedom, teachers and professors can assist in the development of openness to receive, attention and imaginative intelligence. Free schools such as the Brooklyn Free School develops these qualities which regular schools often neglect because of the old mindsets.

Attention and openness to receive are viewed within a holistic experience cycle which the "old-school mindsets" rarely consider. The old-school mindsets are often determined by the "ruling class," which imply teachers, professors and predetermined curricula indicate what students ought to be giving attention. Some exceptional "inquiry" professors (like yourself Albert) do not follow a predetermined curriculum. These “inquiry professors” plan, but their planned activities often include indeterminate, unplanned outcomes.

Your  $E=mc^2$  simplified complexities of earlier known orders. Your ideas include some practical suggestions for increasing student open inquiry and for creating more self-direction. You said imagination is more important than knowledge. Everything one knows seems to

originally arise from awareness and imaginative self-direction.

When students pay attention to what they find remarkable, interesting and important, they are actively involved in generating more of their own self-directedness. Your heuristic thinking may now shed light on how schools and universities can simplify activity so students can amplify the basic element of life, "self-organization." Open minds are required for heuristic thinking since more uncertainties and difficult-to-measure elements are involved.

If students would ask their teachers, principals, professors, deans and provosts what they think about openness, trust, self-direction and freedom, most would think they need developing. But most of them would still only give those difficult-to-define characteristics lip service because of the difficulty in measuring outcomes.

I hope to hear from you soon.

(H.A.)

## THE FARTHER REACHES OF THOUGHT

Extensions of Einstein's thoughts may lead one to note the farther reaches of thought. At the farther reaches of thought, we may need to approach "a thought too far. "A thought about not thinking; the thought of no thought may be a thought too far. Many of us would agree there is more than can be said about any idea. Many of us would also agree there is no idea, or set of ideas, that explains all ideas as there is no number that represents all numbers. There always seems to be room for more. A 13<sup>th</sup> century Zen master, Dogen, said: "Don't cling to your own understanding. Even if you do understand something, you should ask yourself if there might be something you have not fully resolved, or if there may be some higher meaning yet."

Abraham Kaplan, former University of Michigan philosopher, wrote about many philosophies. He was not impressed with philosophies which did not inform and help one live one's daily life in a productive, peaceful manner. He wrote about Zen philosophy in which he thought some nonsense is to be expected. Zen philosophy relates to "no thoughts" about not thinking; among other events. Zen will later be amplified as a possible extension of Einstein's thought. Noticing that one is not a separate self in the present moment is at the heart of Zen as is compassion. Kaplan thought, and many Zen practitioners believe Zen helps one live one's life in a harmonious and peaceful manner as well as helps one liberate one from one's self as Einstein thought was a true value of a human being.

Kaplan thinks there are comparable dangers also in interpreting Zen as a philosophy in the Western sense. He says: "It does not offer a new logic, a special ethics, or distinctive metaphysics of man and nature. In particular it must not be interpreted as a kind of pantheism, monism, nature mysticism, or indeed any kind of transcendentalism. To be sure, it bears some resemblance to such philosophies; but the similarities are quite superficial. For these various schools are involved in just what Zen wishes to avoid 'the pointless endeavor to trap a life in a metaphysical net instead of simply living it.' Zen renounces this embarrassing enterprise in favor of a forthright embrace of living."

Also semi mysterious is zero in mathematics; a place holder allowing for an empty set. Form is empty in Zen and emptiness is form. Mathematicians around 750 CE in India and Central America, after discovering zero, were able to compute in ways that were previously impossible. The mathematician's zero allowed mathematicians to make a quantum leap. An educator's zero, by extending Einstein's thought to liberating oneself from oneself, implies not an empty set, but emptiness of a separate self. Educators today need a quantum leap to

prepare themselves, students, and citizens for a peaceful life within super rapid change that has already begun.

If that is the case, we will need to decide why “X” and “Y” are in our schools’ curricula instead of “P” and “Q.” Curricula are paths to learning and cannot contain “everything.” Curricula are not the learning itself. A path is a way. We will examine whether there is any truth to the old saying of Lao Tzu: “The way that can be said is not the way.” The process of Zen may be useful in helping us know whether a “whole way” can be said.

Curricula in many schools today are primarily determined by the No Child Left Behind Act which require certain content to be learned. I have heard several teachers say they will lose their jobs if they don’t teach for the test. Even university educators have been duped into thinking they must teach “content” as their primary goal of instruction. An extension of Einstein’s thought holds that the process by which content is related is basic and crucial to the learning and understanding of how the universe and individuals within it optimally function.

It is not too early to wonder whether each person may have a distinct “way.” If there now are over six billion people, might there be over six billion ways? Even if a way could be said for each person, we may not have time to say the way for each person while they are alive. A more powerful way of looking at “the way” may be looking at the way as a whole, which when spoken, is divided into parts which are less than the whole. The whole cannot be said at one time, and it appears to be better not to say anything than to say “it” wrongly. Also keep in mind there is the possibility that each person, while open to suggestions from friends and authorities, must decide for oneself what is the way for them.

A new tool to help educators make a quantum leap, as mathematicians did when zero was invented, may be called an educator’s zero, or an Einsteinian mind opener. Zen, while being

very unusual, allows for openness to a multitude of possibilities. Zen, for now, is left undefined but as more is read, the qualities of an educator's zero as well as Zen may be more clearly seen and used. Zen, like quality, may be that which does the defining, and may be why it must be left undefined. If some other event would define Zen in a more quality way, then that other defining event would be more basic than Zen or quality. Since nothing is more basic than Zen or quality, they must be left undefined.

Does the usefulness of Zen depend on the user and the purpose of what one is doing? Note how intention generates purpose and attention and how an educator's zero may be the engaging of attention. It is useful to note that the highly clear and specific field of mathematics, doesn't grab your attention when you hear one prominent mathematician define mathematics as: "The study of invariance under transformation." An interpretation of that definition is: "How that which does not vary, varies." I mention these ideas to help us note that, at first glance, there is what appears to be nonsense in mathematics even though as mathematics is looked at more extensively, the nonsense fades away. There is always more to be said about any idea. As Einstein said: "The laws of mathematics, in so far as they are certain, do not relate to reality, and in so far as they relate to reality, they are uncertain."

As was said, physicists Richard Feynman and Dave Muller, when doing physics, think physicists do not have "now." Dave Muller said: "The concept of 'now' does not exist in physics. Physicists can cover this failing and even make it sound like a positive achievement: 'the laws of physics are invariant under time translation.' That is true -- at least for the laws of physics as they currently exist in textbooks. That means that 'now' has no significance, no meaning. But you know what I mean by the word, don't you?" Is something missing from physics?" (Taken from Andrew Robinson's *Einstein, A Hundred Years of Relativity*). Since

“now” may change every short while, it is almost impossible to measure with certainty. As a result, physicists do not use “now” because it is difficult to identify and measure.

Paradoxically, Erwin Schrodinger, who developed equations for quantum physics, said: “Eternally and always there is only now, one and the same now; the present is the only thing that has no end.” Einstein mentioned that physicists know that there is no difference between past, future, and now. For Einstein, “now” was not absolute and there were different “nows,” depending upon one’s speed and location.

A further look at what some famous physicists have said may help us open our minds to other possibilities. For instance, Neils Bohr, a founder of quantum physics said: “We must be clear that when it comes to atoms, a language can be used only as in poetry.”

## Chapter 5

### CONFLICTING IDEAS

Awareness and open inquiry are restrained as a result of the “mindsets” held by a number of professional educators. Those with old mindsets and those with newer mindsets often agree that teaching practices stem from teacher beliefs. Thirty percent of new teachers leave teaching within three years partly because they believed they did not have influence in their classrooms. What many of them may have thought, was that they were simply delivering the mail – delivering the content; content others thought was important. The No Child Left Behind Act, in the long run, appears to be very destructive in developing, mind-opening and self-direction.

The old mindsets relate to delivering content. Good willed educators think they might use inquiry as a means for delivering content. When they do that, they are equating open-ended inquiry with discovery learning. Discovery learning frequently means students are to discover what has already been discovered. Open inquiry implies the possibility of finding something new. Outdated mindsets prevent newness from emerging and outdated mindsets are a danger to thinking something that can't be learned from textbooks.

Inquiry is not inquiry unless it is open. Also, open inquiry is not a technique to learn a set of prescribed content. Open inquiry is for students to make mental connections so that students themselves can clarify a wide variety of their own puzzlements (areas in which they are

mentally stuck for which they would like to have better explanations). Student open inquiry often resolves discrepancies and perplexities.

Inquirers operate at the analysis, synthesis, and evaluation levels in the cognitive domain. Open inquiry is not a technique for some other higher purpose. Open inquiry is what people do naturally unless it is knocked out of them by a excessive obedience to authority for which schools are noted.

If one notices Bloom's Taxonomy of Educational Objectives, while seeing a live classroom open inquiry session, one would notice students operating at the synthesis and evaluation levels of thought (the highest two) rather than the knowledge and comprehension levels (the lowest two levels of cognition, with which common curricula usually ask students to experience). When teachers deliver the content they frequently serve purposes of others rather than the purposes of students and the teachers. Open inquiry is an experience and not something that can simply be told to another in several steps. Open inquiry must be experienced. Open inquiry facilitates the reconstruction of experience; what education is about.

Teachers and professors holding the outdated mindset, and they are the majority, often think there are specific pieces of content teachers must "teach" at each grade level. Even though some would agree open inquiry is optimal, but because of the No Child Left Behind Act and the constraints of State standards and indicators that must be taught, teacher ability to engage students in this type of experience is limited. One Ph.D. educator told me: "The teacher must pose the question or the phenomena to the students that relates to what they are supposed to be teaching." She implied teaching separate pieces of disconnected information is the goal of teaching.

And Accountability and extra clear, easily measurable standards drive instruction today. Those who believe teaching is disseminating highly clear content (most teachers and professors) often allow others to manipulate them for purposes of following the frame “obedience to authority.” In that sense they are slaves and they are unaware of it. For those with the old mindset, content is supreme because that’s the way they were trained. Many of those with the old mindset appear to be unaware that by 2024, our fund of knowledge may be doubling every 17 days.

It is difficult to communicate conditions for open inquiry, but because this is a time for newness and because we realize the constraints that are placed on us by the No Child Left Behind Act, by states, and by other professional organizations, we could profitably first inquire, and then consider whether or not to temporarily ignore those constraints. Even some with the outdated mindsets agree that “open inquiry is optimal if there were time.” If we first inquired into what we would do if these constraints were removed, we would probably find productive activities which would help each of us see we have the power to remove these constraints. Awareness can arise for one to notice one allows others to constrain him or her. As Abraham Lincoln said: “To remain silent when we should speak, makes cowards of men.”

In the long run, providing conditions for open inquiry will be found to be much easier and more growth-producing for everyone.

If open inquiry is optimal, we first openly inquire and then later, depending upon the constraints felt by individuals and groups of educators, we can choose to leave some restraints. As Thoreau said, civil disobedience is, at times, necessary for the greater good of all.

Teachers and learners have been constrained to such a degree that now is the time to cautiously rebel. If we first exercise our dreaming and imaginations and open inquiry, we could later put back the constraints that the group thinks are necessary. Acting on these constraints, without considering a number of alternatives, is simply allowing the governmental-industrial-complex to manipulate us.

We still have an educational crisis and the “No Child Left Behind Act” continues to avoid education as it promotes low level training for the governmental-industrial complex.

Teachers need the power to teach with passion and if we don’t teach with passion, then we are allowing others to manipulate us in a way that may not be best for teachers, learners, and society. Teaching with passion comes with freeing teachers to free learners. Fewer teachers are passionate since the “No Child Left Behind Act” has been implemented in schools. Teaching for the test is not a way of generating open, self-directing, imaginative citizens. Teaching for the test stifles teacher passion and moves us closer to fascism.

We now have the opportunity to move further in the direction of reducing constraints on teachers and learners if we openly inquire. Open inquiry is very difficult to define since open inquiry is that which does the defining. Awareness and open inquiry can lead us to noticing what is the epitome of living.

Using the word “inquiry” to deliver content is frequently not helpful since delivering prescribed content is not open inquiry. Using "inquiry" when it is not inquiry is deceitful. As the dropout rate soars and as many students are becoming more turned off by their schooling, it seems that this matter is so serious, the standards set by No Child Left Behind Act need changing to more open, free, choice for students. If we do not openly inquire we will be falling into the old traps that are a cause of societal ignorance and a cause for many students dropping out. Because most teachers and school administrators had outdated mindsets in their teacher training, we have not generally been involved with open-ended inquiry in our classrooms. The outdated mindsets lead us away from valuing paying attention to what is.

One professional university educator said: “I believe that in my position I have a clear understanding of what the National “X” Group Standards have presented as inquiry – which is what is accepted as inquiry at the State level. I believe that this group will move forward with that understanding – which is not always full inquiry.” The professor said what she thought was correct but she was passively accepting high level standards promoted by the governmental-industrial-complex prior to the Obama administration. She was obedient to authority.

Einsteinian education helps one think something that can’t be learned from textbooks. Once again, Einstein said: “Is it any wonder that the modern methods of instruction have not

yet entirely strangled the holy curiosity of inquiry, for this delicate little plant, besides stimulation, stands mainly in need of freedom.”

Einstein would agree the best instruction is for the teacher to provide conditions whereby the students do their own structuring (as in continuously reconstructing their experience). Within this process of student structuring, students need to be free to make mistakes and they need a freer, responsive environment. Students also need freedom to choose the projects and the content they will be studying at least beyond grade three. Grading (A, B, C, D, F) stifles inquiry, learning and freedom.

Einstein was highly curious from a very early age. He was given a compass and magnets when he was very young and he was fascinated by how they interacted with each other. In April of 2008, Discover Magazine mentioned that physicists still cannot adequately explain the inter-action magnets have when they are not touching each other.

Einstein’s idea of thinking something that can’t be learned from textbooks implies a need to act before large conceptions and processes are fully defined, even if one’s ego is partly in the way.

Dear H.A.,

I have come to believe that narrow course requirements stifle learning. I notice that Mary Beth Marklein reported on January 23, 2008 that a recent survey conducted by Peter D. Hart Research Associates said universities need to look for new ways to demonstrate student success. She referred to success in terms of student self-direction, global knowledge, and intercultural competence as well as critical thinking and communication skills.

In my work over many years, I rarely found self-direction and global knowledge as goals in course syllabi. Narrow goals (excessive specialization) may prevent learning self-direction, global knowledge, and intercultural competence. An inquiry oriented (mind opening) teacher or professor facilitates mental processing so as to help learners become more aware, more self-directing, and approach global knowledge and intercultural competence. This movement toward self-direction includes some training but many school and university students may already have been trained to desire to maintain the more easily measured outcomes of training. Training requires less thinking than education. There is an endless amount of information to any field of study. Knowledge can be communicated but not wisdom. It is from the threshold of your mind from which you become self-directing, globally knowledgeable, and inter-culturally competent.

Most teachers and professors teach the way they were taught. Teachers and professors who lead a student to the threshold of his/her mind are more powerful learning agents than those who only disseminate information (except for courses which primarily “train” those who consciously choose to be trained.). Teachers and professors who lead one to the threshold of one’s mind often have imaginations that go further than those who primarily “train.”

As was earlier said by Todd May: “We need to consider the possibility that the world—or, since the concept of world is too narrow, things or being or what there is—outruns any categories we might seek to use to capture it.... This is not to say that our particular categories are lacking something that other, better categories would give us. Our imagination must go further than that.”

We go “further than that” when we have teachers and professors who help us stretch and open our minds so that we can think something that cannot be learned from textbooks. Many mind-opening teachers and professors learned mind-opening on their own since their school and university coursework probably did not teach mind opening. Most teachers and professors were taught to train rather than educate. The center of education is self-direction as the central mode of life is self organizing. Some student may, in a polite way, resist excessive training, but one needs to be polite when resisting or one may fail.

The CEO of General Electric, Jeffrey Immelt, mentioned inquisitiveness first on his list of three characteristics of leadership. With a nudge from schools, we could greatly increase curiosity and imaginative behavior and help change “trainers” to “educators.”

Nipun Mehta (charityfocus.com) reports that Paul MacCready, winner of human-powered flying machine contest, won because of his naïveté/inexperience. The President of Teach for

America said inexperience was a major cause of success of Teach for America teachers.  
Experts in wing designs had preconceptions which prevented them from noticing superlight wings could be built. MacCready built them. He has a conventional list of rules for innovation: His last rule is: "Don't follow rules." Our common school mindset (obedience to authority) is rule following. Many teachers and professors semi-consciously contribute to this rule following mindset. This mindset gives one a feeling of certainty. A Nation At Risk Report (a 1983 Federal Government White Paper) said: "If an unfriendly of foreign power had attempted to impose on America the mediocre educational performance that exists today, we might well have viewed it as an act of war. As it stands, we have allowed this to happen to ourselves." Although some disagree, schools are not significantly different today than before this national report.

When a student is being trained, as most students seem to be, the training often consists of following rules. With courteous nudging and resistance to being primarily "trained" to follow others' rules (narrow course requirements), one may help educate oneself. We must overcome the old mindset of "obedience to authority" to help generate becoming one's own authority. The American Psychological Association deserves praise for reporting investigations of open avenues which facilitate self-direction which were previously not explored. Subjects such as feeling, consciousness, and wisdom are now being given attention. Attention itself now needs more attention. Intending to attend to attention is a first step. If one gave more attention to one's present experience, one may notice one's thinking is often overly dependent on requirements/rules given by others who have been deemed to be authorities. It would help if students remembered the rule of not following rules when it comes to student education/self-direction. Self-direction makes one one's own authority.

Present experience is the only experience one has, but delusion frequently keeps schools focused on past or future (fourth grade math is often for fifth grade math).

Hermann Hesse asks us to never forget: “Our mission is to recognize contraries for what they are: first of all as contraries, but then as opposite poles of a unity.”

Cordially,

Albert

#### DEFINING COMPLEX CONCEPTIONS AND PROCESSES

Science has found everything is in process yet, as was earlier said, nonscientists and scientists still give process mostly lip service. John Dewey said: “The great systems of Western philosophy have all seen themselves as dealing with something which has variously been termed Being, Nature, or the Universe, the Cosmos at large, Reality, the Truth. Into this state of affairs there recently entered the discovery that natural science is forced by its own development to abandon the assumption of fixity and to recognize that what for it is actually ‘universal’ is process; but this fact of recent science still remains in philosophy, as in popular opinion up to the present time, a technical matter rather than what it is: namely, the most revolutionary discovery yet made.”

While David Muller, states physics has no “now,” Muller alludes to the notion that physicists may need to rethink physics as not having a “now” since he said most of us know there is “now” even though the “now’s” are not simultaneous or exactly the same.

Physics deal with substances that can be identified. “Now” is not a substance nor can it be easily identified. Physicists form hypotheses which are later tested. The word form has no substance in itself and it too is difficult to identify. A hypothesis has no clear form and is difficult to identify. Hypotheses are formed by minds, but minds do not seem to have substance in themselves and are also difficult to identify. The Zen Prajnaparamita says: “...form is emptiness and emptiness is form.”

The Western world has been overly concerned with identifiable clarity and as a result, we waste much time in dealing with trivialities. The substances that can be clearly identified can be connected through minding as when we form hypotheses and do testing. We can't be certain of everything all the time with the subatomic physical world where we must be uncertain of either the speed or location of a particle. Physicists are still uncertain about the connection between the quantum subatomic world and the macro world of gravity. As the philosopher Alan Watts said, consciousness is what one's unconscious is doing. We know about up relative to down and we know consciousness relative to unconsciousness.

Because most other sciences want to emulate the clarity of physics and mathematics, we have failed to recognize and use difficult to define ideas such as now, awareness, mind, present experience, self-direction, and open inquiry. Putting two of these difficult to define words together such as, mind opening, makes it even more difficult to conceptualize and define. Open minds do conceptualizing and much more.

As a result of the difficulty in defining, our society and schools have failed to include open-mindedness as a primary goal of classroom activities. Also as a result of wanting such great clarity, we do much more training of clearly identified behaviors. More complex processes such as minding (awareness), self-direction, and mind-opening are given very little attention

because we have not yet measured those processes carefully, or we have not yet accepted less precise notions of reality as process. The training often done in classrooms has become so specific - - for purposes of clarity - -that “primarily being trained” has the effect of blocking mind-opening, self-direction, open inquiry, and love of learning.

If schools want students to inquire, as some schools do some of the time, those involved in providing conditions for the inquiry process often want to have a clear definition of inquiry. Our Western society frequently forgets that we have been trained to think that unless something is clearly defined, we are stupid about it. If we can't clearly define inquiry, then many think we do not know what inquiry is. We know what “now” is even though it is largely undefined.

What has occurred in Western society is that measurement has become the process which often determines what we do. We seemed to neglect the fact that measurement itself is a product of inquiry, and if a primary goal of living is awareness and self directing open inquiry, we can profit from having the courage to refrain from placing limits on awareness and open inquiry by not limiting awareness and open inquiry to only that which can be readily measured.

We all know how difficult it is to define quality in thought and statement. We want quality, but if we need to measure quality living before we do anything about quality living, we will be deluded to think that measurement itself is what determines quality. Measurement commonly is done with standards. There is, however, some simultaneity to the measurement and development of quality in thought and statement. Western society seems to have overdone the measurement at the expense of the development. This is where courage and some Einsteinian type daring is now needed.

It is difficult to be imaginative unless one has a strong will and courage to make mistakes. It takes imagination to shift paradigms when shifting paradigms are needed. Old paradigms are difficult to shift and they're usually not shifted until there is wide agreement a shift is made or shift is being made. Paradigms are made by humans and paradigms can be changed by humans when old paradigms seem to interfere with quality living. Begley clearly explains the new science of changing our brains via changing our minds, reveals the brain's previously unknown plasticity. About this Henri Matisse said: "The artist must summon all his energy, his sincerity, and the greatest modesty in order to shatter the old clichés that come too easily to hand while working, which can suffocate the little flower that does not come, ever, the way one expects."

One hypothesis worth testing in a period of shifting paradigms, may be to provide conditions for students to notice their present experience for longer than usual. Some wise person said that nothing ever happened in the past, and nothing will ever happen in the future. Everything that happens, happens in the present or does not happen.

What is happening now? Should one be slightly perplexed at noticing some discrepancies to common thought? Noticing that would be evidence of one's paying attention to difficult to define areas which need present attention. This "present attention" again could profitably look at Zen for approaching the farther reaches of defining and non-defining. Zen is a term for an inexpressible way which cannot be said. While Kaplan must use words when communicating ideas about a process which approaches a thought too far, Zen includes the idea that ideas, rather than assisting us in peaceful harmonious living, may at times, move us away from peaceful harmonious living. The movement away from peaceful harmonious

living may result from using ideas which may mistake the map for the territory which it is mapping.

In other words, if we fail to see that complex processes, when stopped, are fixed in order to be clear, we may devolve rather than evolve. When an ongoing process is stopped, what is noted is an instance of the process, rather than the continuing ongoing process itself. Process is more than one instance of process, and we have not given process the attention it deserves as John Dewey suggested.

Einstein mentioned physicists know that there is no difference between past, future, and now. For Einstein, “now” was not absolute and there were different “nows,” depending upon one’s speed and location. When Einstein said that, he was not mistaking the process for an instance of the process.

Kurt Godel’s incompleteness theorem in mathematics may arise because infinite regress is more easily noticed as is continual stopping and starting of a continuous process. Some serious minds have kidded that Godel proved that nothing can be proved.

Awareness of one's present experience is a key to happy living as well as a key to Zen. As Einstein said one’s true value can be determined by the degree to which one liberates one’s self from the self. Zen does that as may later be seen. Some scholars have said that to study Zen is to study the self, and the way to study the self is to forget the self. As we become more aware of our present experience, we may note that we are connected to everyone and everything as Einstein thought. Einstein's liberation from the self is Zen-like.

Another way of understanding Zen is the story of the student thanking a Kaplan-like-teacher for telling her nothing, for teaching her no concepts whatsoever, and for helping her to

begin to realize that attainment, as Layman Hsiang said, “gains nothing, and loss, loses nothing.”

Another way of looking at what can be said about Zen is "nothing" can be directly said. Can we then see the effects of Zen? Remember what Niels Bohr, a founder of quantum physics said: “We must be clear that when it comes to atoms, a language can be used only as in poetry.” Might the same be said when using language about Zen and an educator’s zero, a kind of quantum learning to learn?

Dear Albert,

While there is value in specialization, excessive specialization as now exists, seems to be creating more slaves. There is an old and infrequently considered history of education related by Buckminster Fuller which demonstrates how the elite of the governmental-industrial complex keep many of us in the dark. When we are in the dark we can be more easily manipulated without being aware of it.

Specialization greatly intensified with the early Great Pirates shortly. This excessive specialization continues in schools and universities and often does not follow what the great philosopher, Alfred North Whitehead, said about learning. Whitehead said there first should be an adventure stage of learning where the student is turned on and becomes inquisitive about finding out more about a subject. The second stage is a precision stage where the student learns much about what is puzzling her or him. The third stage, and one that is often dismissed by teachers and professors, is the generalization stage, where one attempts to make

connections (arrive at open big open ideas while allowing uncertainty) not only within a field of knowledge but also between fields of knowledge.

Evolutionary psychology tells us that the brain evolves to give us general tendencies to know what to do rather than giving us a clear-cut than structure to remember billions of discrete pieces of information.

School and university training concentrates mainly on the second stage, the specialization stage and as a result, students and former students -- most of us, are often in the dark and rely excessively on other people's thinking rather than deciding for ourselves.

Today, schools and universities are not frequently concerned with openness and freedom. The kind of government that conservative government's wish to place in other areas (often the Mid-East) seemed, during the G.W. Bush Administration, to be overly involved with secrecy, denial of reality, and manipulation. An oligarchy in the G. W. Bush years seemed to decide much of the USA was doing in the Mideast. This oligarchy seemed to subtly promote racism, sexism, homophobia, and fascism.

One way of judging the power of our schools and universities is noting those we choose to be our leaders. Dave Doane reports the USA has a higher percentage of its population behind bars than any other country in the world: more than China, more than Russia, more than any backwater dictatorship. Roughly 1 out of every 142 US residents is behind bars. Can you notice that Whitehead's adventure and generalization stages have been neglected so that many of us remain in the dark and are easily manipulated by the governmental-industrial-complex? Beyond these general conceptualizations is more openness to the unknown and even openness to the unknowable.

Cordially, H.

## Chapter 6

### ZEN

When someone asks, “What is Zen?” it is useful to remember the story of the young fish asking the Queen fish: “I hear there is a sea. What is it and where is it?” Zen is the study of the self. Because Zen includes what seems to be nonsense, note the “sense” made by famous physicists when talking about physics. J. Robert Oppenheimer, Director of the Manhattan (atom bomb) Project, said: “If we ask, for instance, whether the position of an electron remains the same, we must say ‘no’; if we asked whether the position of the electron changes with time, we must say ‘no’; if we ask whether the electron is at rest, we must say ‘no’; if we asked whether it is in motion, we must say ‘no.’” Does the “not knowing” of Zen apply to physics? As Bohr said, when talking about atoms, it helps to use language as poetry.

When someone asks if Zen has nothing to say, they wonder how can it teach? Abraham Kaplan answers: “Whoever said Zen was a teaching?” Kaplan believes that Zen has value “in that it does not mainly analyze language, or build conceptions; this process of Zen provides people with a way to live peacefully and harmoniously.” Zen, when one is peaceful, wise, and harmonious, helps one know that one already knows what one needs to know. For Zen, noticing is more important than knowing as imagination was more important than knowledge for Einstein. What one notices often rapidly changes and awareness/noticing precedes knowing. Zen includes

broadly focused attention as well as detailed attention. Noticing intention often precedes attention may be helpful in developing awareness of what is ( the doing of Zen).

Zen does not communicate a message. Zen is realization of what is happening in the present, while it is happening unfiltered through preconceptions. Thomas Merton states: “The apparently mysterious and cryptic sayings of Zen become much simpler when we see them in the whole context of the Buddhist ‘mindfulness’ or awareness, which in its most elementary form consists in that ‘pure attention’ which simply sees what is right there and does not add any comment, any interpretation, any judgment, any conclusion. It just sees. Learning to see in this manner is the basic and fundamental exercise of Buddhist meditation...If one reaches the point where understanding fails, this is not a tragedy: it is simply a reminder to stop thinking and start looking. Perhaps there’s nothing to figure out after all: perhaps we only need to wake up...The basic insights of Buddhism are philosophical and metaphysical; they seek to penetrate the ground of being and of knowledge, not by reasoning from abstract principles and axioms ... to reach a state of super consciousness or meta-conscious realization in which subject and object become one. This realization or enlightenment is called nirvana.”

Many native American tribes, report’s David Steindl-Rast ...“hold as their ideal of a well-educated child one who ‘ought’ to be able to sit and look when there is nothing to be seen---- and be able to sit and listen when there is nothing to be heard." Einstein had that talent.

What is frequently not noticed is that openness to receive precedes that to which one gives attention. Some paradigms and fixed conceptions prevent, at times, one from being open to attending to what may facilitate openness and self direction. One’s present experience is an example that “now” (one’s present experience) needs much more attention, in school and out.

Since one's present experience is very difficult to define and is very elusive, ongoing, continuous, (and is a process; something one does rather than explains), we give little attention to it, as physicists have a given very little attention to "now."

If it is ever found, some physicists think that the Higgs particle is a field in which other particles operate. Some Zen writers imply that Zen is like a field within fields in which all other fields, functions, operations, and non-functions act, and don't act. Some Zen masters seem to imply that if one writes about Zen, how can one be clear since there is nothing to be clear about. This may be some of the nonsense Kaplan mentioned. It also may be why many Zen masters write and say little.

While Zen holds nothing, it allows one to see what is; which some interpret as perfections and imperfections. With Zen, imperfect is okay as is everyone and everything. For Zen, accepting ourselves as we are is a key to aware, peaceful, harmonious living. Kaplan asks: If a philosophy does not lead us to peaceful harmonious living, to what is it leading us? Zen implies that there is nothing to know, nothing to attain, and nothing to realize for we already have attained everything we need to attain. We are not a separate "we." Letting go of what one is attached to helps the peace and harmony arise, and helps one accept what one already is. Letting go of a separate self is what Einstein is saying is a true value of a human being. Zen implies the same.

Paradoxically, Zen implies that we profit from letting go even of "letting go." For those who want to attain or achieve more, Zen implies that the desire to get what we do not have is the problem which knowledge and many philosophies attempt to have us solve. Since humans always seem to want more, other philosophies do not often seem to help one arrive at peace, wisdom, and harmony. Furthermore, we may ask, in what regard do these other

philosophies help us if they are leading us to wanting more than we have, and perhaps leading us to wanting even more than we can have.

Zen implies that growth, development, and evolution happen naturally without excessive effort. As Gandhi stated: “There is no way to peace; peace is the way.” We may notice that there is no way to self direction; self-direction is the way; there is no way to openness, openness is the way; there is no way to letting go; letting go is the way. Awareness assists “letting go.”

The notion of a thought too far arises from paradigms which hold the point of living is elaborately complex, rational thinking. Zen does not want us to be irrational. Although Zen followers do not say it, we are already transrational in that we do not, at all times and all places, need a reason for doing everything we do. In a sense, it may be seen that we come down from a unsayable level of thought to use words where reason is used as a tool of daily living. Zen implies that if we had to be rational at all times, we would be slaves to rationality.

Note that Plato wrote about the white horse of reason and the black horse of passion. The white horse of reason, he said, would be continually struggling to hold back the black horse of passion to stay “in line.” Our Western paradigms want to keep us “in line.” (obedience to authority –only follow rules).

Keeping in line (following rules) reduces imagination and judgment. Rene’ Descartes later cemented that excessively rational paradigm for Western thinking. The paradigm has been cemented to the point where nonsense needs to be avoided at almost all costs. Since Zen includes some nonsense, is there a need for more open paradigms to accept events that appear to be nonsensical? If there were no “notes” giving strong evidence from several sources of an event to be published in a professional journal, or a lengthy bibliography with experts

supporting the thought contained in a paper, would our common paradigms permit the publication of a paper in a respectable journal? Einstein published thoughts which were not “proven” until several years after his publication. Would quality philosophical journals accept an article about Zen which does not conform to paradigms of what is commonly considered philosophy? Would Einstein have imagined himself moving at the speed of light if he knew what everyone else knew? Years went by before Sir Arthur Eddington confirmed Einstein’s finding during a solar eclipse.

Have journals become so respectable, under outdated paradigms, that almost total uniformity of writing style (with much quantifiable data) and strict supportive literature, be required before a refereed journal article is taken seriously. We have trained ourselves to conform so well to so many "scientific" practices that we now have difficulty in considering hypotheses of unusual kinds. (Various fields infrequently notice their holding with physicists that “now,” is not worthy of consideration. Other fields also continue to exclude present experience.) If we form some hypotheses surrounding present experience, would these unusual kinds of hypotheses be allowed if there were no quality ways of testing them? Notice that physics has no quality way of testing M theory. Shifting paradigms may help us move in the direction of noticing highly uncommon, perhaps not yet invented, forms of measurement. (The simultaneous use of fMRI and EEG scanners showing brain activity may soon change that somewhat.)

Einstein's thought experiments went outside the boundaries of common thought, to the point they may have been considered “a thought too far” were it not for Einstein himself. Einstein fixed the speed of light and made everything else relative. Before Einstein, everything else was fixed except the speed of light.

Zen implies the judgment of “right thought” includes right understanding, right speech, right action, right livelihood, right effort, right mindfulness, and right concentration. These are conjoined in judgment which can only occur in the present. It also implies that each individual is the best judge of whether or not their thought, understanding, etc. are “right.” It is interesting to note that Thomas Jefferson thought education is that which helps one decide for oneself what will secure or endanger one’s freedom. Zen practitioners agree. Einstein didn’t speak of Zen but his judgment and action speak of a Zen way of being.

Under older paradigms we would think it unwise to allow students to decide for themselves what will secure or endanger their freedom (except for the relatively few free schools such as Summerhill, the Brooklyn, and Tubman Free Schools, etc. which are more open to shifting paradigms).

Margaret Spellings, former G.W. Bush Secretary of Education, and many holding the outdated trainer’s mindset, hold that schools do what they will be held accountable for. Schools, following the No Child Left Behind Act are excessively testing trivialities and primarily disseminating information rather than generating awareness, mind opening, self direction, and open inquiry.

Open inquiry helps one decide for oneself, which is how judgment is developed. When conventional schools are achieving, they are often achieving triviality. Such a statement about present school triviality would be nonsense for former Secretary Spellings and many educators whose judgments do not make a distinction between education and training. Arne Duncan, the Obama Education Secretary, will be different but will he be different enough? At the time of this writing, he appears to be only modifying the No Child Left Behind Act, rather than dumping it.

Zen implies that some Zen nonsense may be needed for freeing students to learn. Those more conforming type schools, through which most of us have been trained, seem not to be open to notice that each of us has been trained (in a coerced way) to desire more training as well as to desire many more material goods than we now have, or even can have. Less competition leads to less greed. (See Alan Watts You Tube video on music.)

The regulation that many are now suggesting for hedge funds and financial institutions is needed because schools and society lacked judgment to develop individual judgment. It is projected that one needs individual judgment before one can liberate oneself from a separate self as Einstein suggested. Had development of judgment been a primary goal of schools, liberating oneself from oneself would occur more often.

Aware and honed judgment would have forecast a 2008/2009 financial disaster. We have trained individuals to think they are not interconnected to everyone and everything. We learn to judge by judging. Judging what to learn and how learn it is crucial to learning judgment.

Outdated paradigms often permit one to see newer paradigms as bad and ineffective. The newer, more open paradigms hold that when one is free to explore what one thinks is remarkable, interesting and important, one learns best. One not only learns best under the open, freedom to learn way, freedom to learn accelerates one's learning to learn;(inquisitiveness) what General Electric President Jeffrey Immelt held to be the highest value.

Inquisitiveness, and facility of asking questions have been shown to flourish when students are free to openly inquire, as per the Illinois Studies of Inquiry by J. Richard Suchman. Suchman found that 90% of all the talking that was done in classrooms, was done by the teacher. With Suchman's ideas, students are free to explore or not explore causes of

discrepancies that are either presented by the teacher, or discrepancies and perplexities and confusions which may be mulling around in a student's mind. Suchman found freedom, a responsive environment, and discrepancies are needed for open inquiry to flourish in classrooms. Awareness of what precedes and facilitates open inquiry.

Ideas for generating student curiosity, wonder, and openness have been around for many years, but because of the difficulty in measuring curiosity, wonder, self-direction, and openness, their development has not been widely attempted. In early Greece, school did not mean school as we know it today, but rather, school meant playing with ideas.

The early Greeks were wise enough not to bother with attempting to define “playing with ideas.” We know what playing with ideas is as we know what “now” is. Schools and many teachers seem to think that before students can openly inquire, they will need more information than they presently have. Schools never quite get to open inquiry unless one is a student in a free school whose mission statement is similar to the Brooklyn Free school's statement appearing below:

“The Brooklyn Free School (BFS) places the highest emphasis on the personal development of each student and seeks to minimize, or if possible eliminate completely, undue influence, pressure and stress that accrue from expectations on students to acquire the accepted wisdom of present day society or meet arbitrary standards, so that each child can become an independent learner and thinker.”

“The Brooklyn Free School is a true democratic school for children of all ages. Each child and staff member will have an equal voice in major decisions (and minor ones) affecting the day-to-day running of the school. BFS believes that all children are natural learners and they are fully supported to pursue any interest they have, in the manner they choose, at their own

pace, and for as long as they want to, as long as they do not restrict any other person's right to do the same. Admissions to the school are not based on ethnicity, income level or geographic location.”

“The school takes full advantage of the tremendous diversity of individuals, businesses, organizations, and communities that the City of New York, and the entire Metro area, has to offer to build on students' interests. No one (students, staff, or visitors) is discouraged from offering a class, event, or activity to the school, provided that it is non-compulsory. The school will spread the news about the effectiveness of democratic/free schooling in the New York area to promote the growth of non-coercive education throughout the country and the world. “

The Brooklyn Free School  
120 16th Street, Brooklyn, NY 11215  
(917) 715-7157

[contact@brooklynfreeschool.org](mailto:contact@brooklynfreeschool.org) (Alan Berger, Prin.) The Harriet Tubman Free School’s Director is Elizabeth Carivan. ([lizcarivan@gmail.com](mailto:lizcarivan@gmail.com)). Former Administrator, Isaac Graves, now helps run AERO [democraticeducation.com@gmail.com](mailto:democraticeducation.com@gmail.com) and [alternativeeducation@gmail.com](mailto:alternativeeducation@gmail.com).

Carlo Ricci, Ph.D. Nipissing Univ. Canada, Editor: Journal of Unschooling and Alternative Learning, <http://www.nipissingu.ca/jual> and Jerry Mintz, at [jerryaero@AOL.Com](mailto:jerryaero@AOL.Com) is the director of the Alternative Education Resource Organization which strongly promotes these free schools.

Paradoxically, places like the Brooklyn and Tubman free schools are not at risk because they are not following the “No Child Left Behind Act.” It is easy to understand that democracy cannot continue unless its citizens are educated. Who would want a citizen voting if their

vote was an ignorant one? This is somewhat difficult to understand but it is difficult to notice that schools are not educating (developing openness, awareness and self direction) when they are primarily training.

Some schools' philosophies of education have stated that they want to develop inquisitiveness and love of learning. Some observers have seen that when the daily lesson plans which teachers implement with outdated paradigms, the aims of a love of learning and open inquiry have not only not been achieved; the opposite has occurred. Students are less inquisitive and love learning less as a result of the trivial dissemination of information and strict requirements for "order" (obedience to authority) not chosen by students.

A consequence of following paradigms not included under mind opening is that students do not know until an authority tells them they know. Many students, after they graduate, as a result of the narrow training and trivial knowledge absorption, look for leaders to tell them what to do. Their looking to others to tell them is looking for authorities to tell them what they need to know and how to know it. Education, rather than only training, makes one one's own authority.

Some leaders may not want to implement newer paradigms because fewer people would look to them for knowing what it is they need to know, and for doing what it is they need to do. Zen/Einsteinian wisdom suggests that he who is his own physician, has a fool for patient, but he who is his own educator is on the road to wisdom.

Zen is the basis promoting open thinking so that more people will be more peaceful and live more harmoniously. Accepting others as they are is one way of moving in that direction. Zen flourishes under open thinking and open education. Zen practitioners often accept everyone even those with closed minds.

Einstein and Zen promote knowing one knows without someone else telling one, one knows. This kind of knowing is done through awareness and open inquiry of what is interesting, remarkable, or important for the inquirer. It relates to what Byron Katie mentioned: “Inquiry is a way to end confusion and to experience internal peace, even in a world of apparent chaos.”

As schools do not frequently deal with trust, schools could profitably note that Covey’s, *The Speed of Trust*, as per the Christian Sakar article, states trust is a function of both character (which includes integrity) and competence. If school administrators, teachers, and professors trusted students (as they do in Einsteinian free schools) what is said by Covey about the “trust dividends” for business, would be true for student learning. As you recall, Einstein said that character was more important than knowledge for scientists.

Covey’s *The Speed of Trust* says:

“Trust is the one thing that affects everything else you’re doing. It’s a performance multiplier which takes your trajectory upwards, for every activity you engage in, from strategy to execution.”... If you look at the nature of the world today, a foundational condition in Thomas Friedman’s [flat world](#) is the presence of trust.... “In issue after issue, the data is clear: high trust organizations outperform low-trust organizations.” Trust is often missing in schools. In high trust organizations, Covey reports the following:

“Information is shared openly. Mistakes are tolerated and encouraged as a way of learning. The culture is innovative and creative. People are loyal to those who are absent. People talk straight and confront real issues. There is real communication and real collaboration.”

Cooperation is more valued than competition when trust is high. Zen and trust in free schools go together. In low trust organizations Covey reports a culture that reflects ...”facts

are manipulated or distorted. Information and knowledge are withheld and hoarded. People spin the truth to their advantage. Getting the credit is very important. New ideas are openly resisted and stifled.” Traditional schools reflect a low trust culture whereas Einstein-free type schools reflect a high trust culture. Obama’s transparency facilitates trust.

Covey believes that where trust is lacking people (including students) reciprocate with distrust. Covey said: “That’s how the vicious cycle of mistrust starts and spirals downward.... There is a risk in trusting people, but the greater risk is not trusting people.” Low trust schools are similar to the opposite of Zen; the opposite of an Einsteinian school. As Rita Mae Browns said: Creativity comes from trust. Trust your instincts. And never hope more than you work.”

Zen is about noticing what is. Attention is required. Sam Anderson said in the New York Times on May 17, 2009: “Back in 1971, when the web was still twenty years off and the smallest computers were the size of delivery vans, before the founders of Google had even managed to get themselves born, the polymath economist Herbert A. Simon wrote maybe the most concise possible description of our modern struggle: “What information consumes is rather obvious: It consumes the attention of its recipients. Hence a wealth of information creates a poverty of attention, and a need to allocate that attention efficiently among the overabundance of information sources that might consume it. As beneficiaries of the greatest information boom in the history of the world, we are suffering, by Simon’s logic, a correspondingly serious poverty of attention.”

Dear H.A.,

I agree with what you are saying and I increasingly believe that the excessive training done in schools and universities, is stifling education. I never guessed that in a full four years of undergraduate university lecture courses I would have heard nearly 20 million words in classrooms. I also never guessed that I might be more educated if I heard half that many. I never knew that many of my courses were training me in narrowly defined skills. I never guessed that I would need the general skill of “putting things together”. I never would have put  $E$  with  $mc^2$  if I didn't rebel somewhat to against excessive training.

If you now wanted to put much of what you were taught together, where would you start? If you did have “it” together, what could you say about “it?” Many teachers and professors hold that “it” is elusive, but because of our common school and university training, like “now”, we know what it is. We are often led to think that if we can't define something, we are stupid about it. When we're stupid about it, we are also trained to keep our mouths shut.

Since teachers and professors frequently open their mouths, many of them know they are not stupid about the “it” of the courses they teach (tell about). If you asked them if the “it” they are talking about may be connected to a larger, more comprehensive whole, many of them would agree that it could, but that connecting to a larger whole is not within their field. Their field is about knowing the content of their field/discipline, and any attempts to move outside of their field (to connect to a larger whole) is too obscure, undefined, and fuzzy to be worthy of their time and consideration. Their judgment of themselves and their peers considers what they know “within their field/their specialty.” Even though many hold a Doctor of Philosophy degree, they are often not philosophical about what they know.

Most students prefer to get good grades, a degree, and secondly, they want to be trained in specific skills as well as to have a broad general education. What frequently happens is that “education” is treated as “training” in specific, well-defined areas. Some who have studied the field of education know that education is more than training. Some teachers and professors see no difference between training and education.

John Dewey held education involves one in the continuous reconstruction of experience through which one becomes more self-directing. As one becomes more self-directing, one relies less on groupthink and more on what one’s specific and general experience tells one (thinking for oneself). Narrow school and university training tells one about developing narrow skills that may be used in a job. Narrowly trained students do not know until an authority tells them they know.

Narrow teachers and professors often consider “teaching” the same as “telling.” Most school and university training includes what can be found in textbooks. As I said, narrow school and university training does not help one think something that can’t be learned from textbooks, nor does it deal with developing imagination. I also said: Imagination is more important than knowledge. Imagination helps one think something that can’t be learned from textbooks.

To notice for yourself whether students are primarily “trained” or “educated,” please note the kinds of questions “students” would like to have teachers and professors answer. When one is primarily “trained,” the questions asked are more like: “Will that be on the test?” or: “How many pages do I have to write?” If one is primarily “educated,” one’s questions are more numerous and those questions deal more with imaginatively exploring unknowns,

discrepancies, and paradoxes within and between fields, as well as exploring how to make larger connections to more expansive events.

I hope students don't blame their teachers and professors. Most teachers and professors holding the outdated mindset have gone through the kinds of lecture courses we have completed. There is an old mind-set about teaching equals telling. Their graduate courses often included much "training" even though they also had more lab work and small group seminars. Too often teachers and professors are also frequently motivated by grades and degrees/promotions. They too are rewarded when they can recite much information rather than be imaginative. Schools and universities infrequently deal with imagination or developing judgment.

I invite students to ask their teachers and professors to save ten or twenty minutes at the end of a lecture class for open-ended inquiry. When some teachers and professors encourage open inquiry, students often discourage inquiry with silence because schools and universities have not rewarded open inquiry. Mastery of a narrow specialty has been rewarded by teachers and many professors. The outdated mindset of "training equals education" maintains the status quo.

We have been trained to avoid open inquiry but some great minds have, through imaginatively asking many questions, made breakthroughs within and between fields. New paradigms involve new ways of looking at events. Events evolve slowly often because of all the fixed knowledge which society, teachers, and many professors think need to be mastered at all levels of school and university training. Knowledge is good only until more encompassing events change that knowledge. I continue to believe we need what we might

call an educator's equivalent to a mathematician's zero. Openness and self-direction seem to play a role.

Cordially,

Albert

## Chapter 7

### TRUST AND LEADERSHIP

Covey says: "...Berkshire Hathaway's, Warren Buffet, often does business with a handshake (192,000 employees with 42 different wholly-owned companies with only seventeen people working at corporate headquarters). Buffet employs a seamless web of deserved trust. Charlie Munger says: "It's not blind trust, but smart trust." To help us imagine student learning if schools used "smart trust," let's consider Warren Buffet's leadership which seems to be similar to what Oprah Winfrey said: "Leadership is about empathy. It's about having the ability to relate and to connect with other people for the purpose of inspiring and empowering their lives" (empathy is what President Obama said is needed in a Supreme Court Justice ). If only more teachers had that form of leadership. Teachers of teachers rarely spend time on developing that ability perhaps because of the difficulty in measuring it.

To look at differences between good schools and effective schools, it may be helpful to consider, paradigms, openness, and fMRI scans. We do not want our schools to move tomorrow to the science fiction of Star Trek's Captain Kirk, but it would be helpful to boldly move to where we have never gone before allowing ourselves to approach "a thought too far." What if we looked at the possibility that some paradigms, as a result of decreased openness to experience, may bar some powerfully usable ways of learning to learn. Some paradigms and

fixed conceptions prevent us from being open to paying attention to certain events such as what is happening “now.”

Physicist Muller, who said that not having “now” in physics may be a failure of physics, also said: “He (Einstein) was able to show that the concept of simultaneity could not be put on a universal basis.” That means there is no universal now, good within all frames of reference. Einstein showed that time slows as speed increases. This is not noticeable until one moves almost unimaginably fast. Muller’s example follows: “Take two people, John and Mary, twins who get together to celebrate their 21st birthday. Then they go off and travel. They both experienced time: they both age. They get back together when John is celebrating his 22nd birthday. But unless their travels matched precisely, they will not both have experienced the same amount of time. If for example, John stayed home and Mary spent a year in a circular path moving at 80% of the speed of light, then when she returns she will not be a year older. She will have “experienced that year of life but only in a little over seven months.”

Muller believes this does not mean that "now" has no meaning. He says: “You know what it means to you, even if your now is different from mine. There is something there that physics has not yet addressed; some people think it never will... Einstein taking the weird behavior of time seriously then applied it to mechanics. The result was his most famous equation,  $E=mc^2$ .”

One approach worthy to explore is to hypothesize that educators have not yet taken the present time seriously, and if they did, classrooms would spend much more time attending to an individual student’s present experience. “Now” may be crucial for educators and whether we would need new paradigms to better explore students’ present experience in classrooms

related to the students general learning, has not yet been explored. This general learning is learning that helps one openly decide for oneself. That kind of learning has self-direction and openness at its center. Learning to learn is maximized under these conditions.

“Time” was used by the author, Jeff Foxworthy, when he titled his book: *“How to Talk More Gooder Fastly.”* While all time alludes to the notion of “now,” realistic notions of anything frequently have a psychological component. The psychological component of “now” is that the length of “now” varies depending upon the experience one is having in the present. Einstein briefly explained relativity by mentioning two seconds touching a burning stove would be considered a very long “now” compared to two seconds of kissing a pretty girl. The Greeks used the word kronos for time as measured by the clock and kairos for time as experienced during the kiss or the burn.

The paradigms of Western society hold that to be effective, each of us, when communicating, or doing almost anything for that matter, ought to be organized and detailed. This aspect of our common paradigms is habitual and it keeps us from focusing on the present. The present is continuous and ongoing, and to a certain extent, is not yet organized and not yet detailed in the sense that the next detail may change some of the earlier details, or set of details.

Another reason for people in Western cultures and schools not focusing on present experience is because present experience is not clearly defined and is probably incapable of clear definition since a “now” (the present) lasts only a few milliseconds to several minutes or longer (depending on circumstances)..

If we spoke about our present experience we would only partially know what we are talking about because present experience continues unless we stop it (and when stopped, often becomes a "fixity" which John Dewey decried).

Another reason for not focusing on present experience in Western society is because we need to trust our inner selves and the people we are dealing with regarding their focusing on present experience. Teachers need to focus on their present experience if we are to expect students to focus on their present experience. Since we have not been schooled in focusing on present experience, we often don't know how and we have a given little thought to its value. As the philosopher Alan Watts said: "Life is like music for its own sake. And when listening to music we are not listening to the past, we are not listening to the future. We are listening to an expanded present."

We can only be serene in the present. Some thoughts of past and future, at times, obstruct present serenity. The Zen statement: "May all beings be at ease" (now) is not a statement to take lightly. It seems likely that one cannot be at ease unless one is self-directing and open-minded. We might wonder whether open mindedness is required for the formation of evolved paradigms. We may find it useful to determine which paradigms retard evolution and which assist evolution moving at an appropriate pace. An appropriate pace would often be a peaceful pace. Coercing students to learn by a motivating through grading is not peaceful and will and often retards self direction.

Twelve stem behaviors, as mentioned by psychotherapist James Guinan, are helpful in moving one at a peaceful pace. The first stem behavior is: "Increase the tendency to allow things to happen, rather than make things happen."

If mind-opening and self-direction occur, they can only occur in the present. Aristotle and Rene' Descartes have held that we talk about what did happen, and then predict what may happen as a result of what did happen. As physicists Feynman and Muller said, there is no now in physics. Western research has been so enamored with physicists that psychologists, educators, and other researchers have attempted to emulate the precision with which physicists work.

“Now” has, of course, not been included in the research because it is not clearly identifiable. “Now” would more clearly exist if the “difference” ontology of Gilles Deleuze and Todd May were employed. Rather than knowing isolated identities as we do in our Aristotelian ontology, we would know events by how they are different from other events. The difference ontology of Deleuze and May is more relational since separate identities of an outdated ontology are mostly disconnected events. The newer difference ontology relates to knowing how one event is different from another event. What Kincheloe, Steinberg, and Tippins say about relations closely correlates with what Deleuze and May are saying in May's, *Gilles Deleuze, An Introduction*.

The book, *Awareness*, by J. O. Stevens, has group and individual activities that help one focus on their present experience. Carl Rogers, the author of *Freedom To Learn*, in his work as an educator and as a psychotherapist, almost always focuses on present experience. Zen implies the present is all that is. Einstein said past, present, and future are one.

FMRI scans may lead to demonstrating the value of brain activity when focusing on present experience. Notice how foreign the notion of present experience, (now) is. It is so foreign because of our common paradigms thought someone was foolish for focusing on something

that could not be clearly defined. I wonder if a paradigm shift will be needed before hypotheses are formed to determine the value of focusing on present experience.

The old saying that it takes 25 years for research to get into classrooms, if accurate, would be disastrous in that change is now accelerating so rapidly. Now is the time to focus on “now” especially in the light of the tremendous need to help students become aware, self-directing and open-minded. Self-directedness, open mindedness and awareness are hallmarks of imaginative people.

Einstein thought the modern methods of instruction were terrible. Einstein spoke of the enormous value of being intuitive and alluded to the notion that intuition can be developed. Einstein would appreciate a statement of the Maumee Valley Country Day School in Toledo, Ohio which encourages, as primary goals, the development of enlightenment and compassion as well as that which will help students better learn. This is very like Einstein's thought and is somewhat Zen-like.

John Dewey thought education is the continuous reconstruction of experience. As a result of that continuous reconstructing, which can only go on in the present, the student is better able to be open, aware, and self-directing, and as a result, can better invent his or her present and future.

Teachers in classrooms are frequently not interested in shifting paradigms, hypothesis formation, or openness to present experience. Many classroom teachers, when talking to university teachers of teachers, frequently want help regarding what can they do in their classroom tomorrow morning to help maintain order (have students be obedient to authority). Frequently they want tools and methods that will help them manage (control) students so that the lesson from the pre-planned curriculum for all students may be taught (told) without

interruption. Many of those teachers are more interested in their “disseminating the content” than in their students learning powerfully.

Focusing on present experience may generate bold envisioning. To this bold envisioning we will need to try looking at some hypotheses that are rather unconventional. The first deals with present experience. Because Zen is primarily concerned with present experience, please notice that some notions, weird to Western thinkers, yet held by some Eastern thinkers, may help us increase our self-directing thought and behavior as well as mind opening and peacefulness.

Robert Pirsig, author of *Zen and the Art of Motorcycle Maintenance* and *Lila*, reminds us that people of early civilizations got away from “it all” (of what was a “humdrum” existence) as they increased their use of rationality to explain events. They used rationality and language as a way to get away from “it all.” The “it all” then was a more immediate and “romantic” existence without widespread attempts to explain what happened, and what will probably happen. Today, we have gotten away from “it all” so well that the “it all” is the rational explaining which may now be excessive. Excessive rationality and over-use of words and explanations may now be the “it all” from which we need to get away.

The attempts at explaining what is going on in and around us may now need reducing ( or slow its increase). Such a reduction may help us better notice what is occurring as it is occurring. Alertness always goes on in the present and alertness may help reduce rational explanation. Excessive rational explanation often leads to the fixation of timeless principles. Rational explanation may now be excessive as shown by our lack of attention to present experience (what is happening as it is happening).

Physicist Muller implied there was a flaw in physics for not having a “now.” Since “now” is difficult to identify, it is difficult to measure, and as a result, we may wonder what scientific endeavor now uses “now.” The reduction of excessive rationality would not be irrationality, but rather, being alert to what is happening as it is happening. We alertly notice what it is happening as it is happening not through concepts and principles, but rather, through openness to experience.

As the sage, Osho, said: “Non-violence is not a principle; if you are mindful, you cannot be violent. But, that is difficult. You have to transform yourself.” The transformation would not be irrational, but rather, transrational. A transformation would allow us to alertly notice what is happening as it is happening, and to use rationality as a tool when it is useful for the good of all.

Pirsig reminded us that the early Greeks made rationality the determiner of the highest virtue. The determiner of the highest virtue itself became the highest virtue for Western society. We have been afraid to be somewhat foolish ever since René Descartes cemented Aristotle’s thinking in the West.

Dear H.A.,

Schools and universities could be wonderlands. With Alice in Wonderland I may ask, “Please tell me Sir, which way ought I go from here?” And do we know the answer when the Cheshire Cat replies: “That depends a good deal on where you want to get to.” Most of us

want to be educated (self-directing ) and in order to be educated we need some training. The problem with schools and universities is that students and professors seem to be overly “trained “at the expense of “educated” partly because few, if any, are evaluated/graded/promoted on the basis of open, imaginative, self-directing inquiry. What can we do about that? We could consider what it would take to learn to know one knows, without an authority (teacher or professor) telling one, one knows.

If teachers and professors do or say whatever it takes to help one become highly interested in what the teacher and professor is going to say or do next, one has a great teacher and professor and their classrooms may be similar to a “wonderland.” It is often difficult for teachers and professors to make students interested in required courses. Students learn best when they hear, read, or study a topic the student thinks is remarkable, interesting, and important.

As I previously stated, is it any wonder that the modern methods of instruction have not entirely killed the holy curiosity of inquiry; for this delicate little plant, besides stimulation, stands mainly in need of freedom. When students are required to study what the professor thinks is remarkable, interesting, and important, the student is not “free” to follow his or her interests unless the student highly agrees with the teachers or professor’s choice.

Teachers and professors often teach the way they were taught. Of course they experienced, discussed, and experimented with topics they were probably interested in at the graduate level. The system of which I spoke against involves obedience to authority. Many professors, during their classroom activities, do not use their authority to help students become their own authorities. Students are, to a certain extent, kept in the dark about how to be one’s own authority since those who are their own authorities often learn to be their own

authority outside of university classes. Reduced aware judgment continues the extension of authority outside of oneself.

With the exception of some fine arts and music courses, most teachers and professors, unfortunately, do not encourage open, imaginative inquiry in their classrooms. Open imaginative inquiry will often not be open, imaginative or inquiry in an unchosen course that is graded by an authority. Imagination, openness, and inquiry are difficult to measure. With all the pressure from a wide variety of sources to be accountable for what one does, teachers and professors often give little time to that which cannot be measured with relative ease. Self-direction is difficult to measure, but if we learn by doing, as great educators have said, we learn to be self-directing by being self-directing. Teachers and professors who openly facilitate self-direction do not grade students for their self direction. If they don't grade students, they will probably be fired by those holding the common current mindsets.

We have been trained to avoid open inquiry but some great minds have, through imaginatively asking many questions, made breakthroughs within and between fields. New paradigms involve new ways of looking at events. Events evolve slowly often because of all the fixed knowledge which society and many trainers think needs to be mastered at all levels of school and university training. With our fund of knowledge doubling rapidly, is it fair to say that knowledge is also changing? Notice what our friend Sigmund Freud said: "When we share, that is poetry in the prose of life."

Cordially,

Albert

UNLEARNING AS A CONDITION FOR OPEN LEARNING

A condition for open learning is to allow oneself to be periodically de-schooled so as to reduce or eliminate delusional habits. Charles Eisenstein has some excellent ideas in his recent article in Education Revolution part of which appears below.

De-schooling yourself, according to Eisenstein, is a way of ridding yourself of habits and beliefs that are strongly involved in our society and schools. Schools tend to reinforce these habits which may profitably be eliminated if students are to learn powerfully and to be at peace in a rapidly changing world. Old mindsets are often habitual.

On Eisenstein's list of 28 habits that need elimination is "coercive schooling no longer serves our democracy" and perhaps it never did. Einstein would agree with Eisenstein. Coercive is not often considered in relation to schooling. Students ought to be free to choose the classes they participate in at all levels beyond grade three and maybe even lower.

Another problem-causing habit is: "Knowledge equals information, and to know about something is to know something," said Eisenstein. This leads to excessive testing as is facilitated by the No Child Left Behind Act. This leads us to think that everything we know should be evaluated in a quantifiable way. What is quality in thought and statement is not answered in a quantifiable manner, and not paying attention to what is, is a serious mistake made by a variety of school workers.

Eisenstein's thinking fits with Zen in that we have been habituated, through socialization by schools, to seek external validation for our choices by asking authorities "What should I do?" and "How do I know I'm right?" We also need to get rid of excessive reliance on authorities

and move in the direction of realizing we are our own authorities living with and among other authorities who also freely decide for themselves.

When we are our own authority, we will less often seek credit for getting the right answer. Another habit to be removed, suggests Eisenstein, is schools have taught us to think that all problems have right answers.

Schools have habitually trained us to think work is primarily completing assignments, and that it is always important to be “right,” as Eisenstein suggests.

Eisenstein mentions other habits needing reduction. One of his most profound ideas is that we must build into our thinking the notion of impermanence so we institutionalize and perpetuate nothing that may later need to be eliminated. Zen practitioners strongly agree. This habitual thinking and acting is often done unconsciously so we must continue to be alert to reduce those habits. Eisenstein is telling us to be alert and aware of what we’re doing as we’re doing it. Einstein and Zen concur.

Most teachers give little consideration to how they have been coerced in school and how they are now coercing students in their classrooms. When we are manipulated into doing things we do not wish to do, we frequently allow the manipulation. We have been trained to be unaware of our allowing the manipulation, “because that’s just the way things are.” We also have been trained to be unaware of the power we have. As was mentioned before, he who is his own educator is on the road to wisdom. Examining our grading system with a possible notion of the eliminating evaluation with grades is worth considering. Open inquiry is much more crucial to our functioning at higher capacities than is mastering pre-conceived content. The governmental-industrial complex uses grades and degrees achieved for hiring

and promoting. In doing so, they will not need to spend money to accomplish the same task. This is done at the expense of one's becoming one's own authority.

Eisenstein mentions meditation as one way of paying attention to what we are doing as we are doing it. Teachers and administrators may wish to consider allocating some school time for paying attention to one's present experience as it is done in an Einsteinian/Eisensteinian open, free school. Almost all school activities would not be required. (Except meetings where school decisions are made.) Free schools teach democratic living through doing it in school. Giving attention to present experience is the type of activity which provides conditions whereby one notices what is happening as it is happening, without there being a right or wrong to what one is noticing. It is simply what one notices "now" (and as each new "now" emerges).

It may be helpful to note that "Zen" is Japanese for the Chinese, "Chan," which comes from the Pali (ancient Indian) "Dhyana." Eisenstein doesn't mention it but he would agree with Dean Sluyter, (an outstanding teacher whose "telling" does not conform to what I call "teacher telling"). Students meditating may be the opposite of teacher-telling. Many associate Zen with meditation. Every activity one does may be a meditation.

Sluyter writes in his *Zen Commandments* that meditation is something like an M word. He implies that everything one does and doesn't do is meditation when one is mindful. He mentions that Plato said: "You cannot conceive the many without the one." He gives the analogy that each of us are like a wave in the ocean. He says:

"Unlike waves, the ocean is not limited to puny sizes and shapes, and while wave after wave crashes into oblivion, the ocean lives on. What is more, the ocean connects every wave

to every other wave, dissolving isolation, and it is immune to the turbulence of change -- -- even when there are tempests at the surface, the ocean rests in its bed in perfect tranquility.”

“What I want to do, then, is to be more like the ocean. What separates me from it? Amazingly, nothing. The closer we look for the division between wave and ocean, the clearer it becomes that there isn’t any. The wave line (top and bottom of a wave) is merely an imaginary structure in the diagram. In fact there is no such ‘thing’ as a wave, no such limited self-existent object. It is just a function of the limitless ocean, a way the ocean expresses itself. So my quest to overcome limitation has been misdirected all along. Instead of trying to swell my wave higher or manipulate the other waves to suit me, I can just settle into my overlooked base until I fully experience that I’ve been ocean all along.” Sluyter promotes allowing events to happen – stem learning one.

Eisenstein mentions three other habits that need attention. One is that school and society have programmed us to think our personal worth depends on how we are evaluated by others, and that our status is defined by our rank within an institution or society. Another very important habit that needs eliminating is thinking, “life is a process of graduating from one externally-provided program to the next.” Because we have been trained rather than educated, this continues in unaware ways. Open-ended inquiry and paying attention to our present experience can help reduce those habits. Reducing habits helps make us become our own authorities. Groupthink is one result of each of us not being our own authority.

Research on brain plasticity shows how brain plasticity can not only help us get rid of habits; it can also put us in a rut if we fail to be alert. Einstein also mentions listening without judgment as being very important. I am placing a quote by Henri Nouwen below which helps us understand what Eisenstein is moving toward (from Oprah Magazine).

“When we honestly ask which persons in our lives mean the most to us, we often find that it is those who, instead of giving much advice, solutions, or cures, have chosen rather to share our pain and touch our wounds with a gentle and tender hand. The friend who can be silent with us in a moment of despair or confusion, who can stay with us in an hour of grief and bereavement, who can tolerate not knowing, not curing, not healing and face with us the reality of our powerlessness... makes it clear that whatever happens in the external world, being present to each other is what really matters.”

What Nouwen and Eisenstein are talking about is best learned by doing. Doing “it” is a sign of intelligence and wisdom. As Mohandas Gandhi said: “There is no way to peace; peace is the way.” Each could profit from being as Ghandi suggests: “Be peace.” and “be the change you wish to make.”

Eisenstein’s entire article appears in Education Revolution (can be found at JerryAERO@AOL.com (Alternative Education Resource Organization).

“I find that because of modern technological evolution and our global economy, and as a result of the great increase in population, our world has greatly changed: it has become much smaller. However, our perceptions have not evolved at the same pace.” --Dalai Lama

Dear Albert,

You mentioned an old and infrequently considered history of education, related by Buckminster Fuller, inventor of the geodesic dome, that demonstrates how the elite of the governmental-industrial- complex keep many of us in the dark. When we are in the dark, we can be more easily manipulated without being aware of it.

Fuller relates how the Great Pirates would establish a land-based home and made someone the Governor. The Great Pirate would tell the Governor to tell the Great Pirate when a smart young person is noticed. The Great Pirate would then ask the young person to study a specialty such as accounting, finance, navigation, shipbuilding, or some other important skill of the day. The Great Pirate would tell the young man to only study that specialty because the Great Pirate would be the only comprehensive thinker who considers all fields of thought. These specialists were paid reasonably well but they always took orders from the Great Pirate. They were not independent comprehensive thinkers as was the Great Pirate. The specialists were partly enslaved as students often are in present day schooling.

Specialization that began with the Great Pirates continues in schools and universities and often does not follow what the philosopher, Alfred North Whitehead, said about learning. Whitehead said learning should first include an adventure stage of learning where the student is turned on and becomes inquisitive about finding out more about a topic or field. After a while, the manipulation to specialize is so thorough that one, at times, enjoys being manipulated and unconsciously wants others to think for him or her.

School and university training concentrates mainly on Whitehead's second stage, the specialization stage. As a result, students and former students – many of us, are often in the dark and rely excessively on other people's thinking rather than deciding for ourselves.

The training of our minds has been so subtle that the majority rarely notice the privileges they have. This is particularly true of white people and men since people of color, women, and gays still do not have the privileges that whites, males, and straights do. This appears to be changing as the Obama Administration move ahead. For more on white/ male privilege, Google Peggy McIntosh.

Most of us feel we can do little about racism, sexism, homophobia, and fascism. That is part of the subtle training/programming we are given in our schools and universities as a result of teachers and professors focusing only on Whitehead's specialization stage of learning. This subtle programming has been going on for so many years that our teachers, professors, and teacher trainers have also often been programmed to think their job is to give students information at the specialization stage of learning. What is worse, we do not notice that when we follow others thinking, it may be temporarily easier for us, but in the long run, we remain slaves to the subtle manipulators who too frequently think for us.

Cordially,

## CHAPTER 8

### TWELVE STEM BEHAVIORS

When Einstein was asked by a reporter whether he kept a notebook for his ideas, Einstein replied that he didn't need one because he had only one idea.

Would Einstein promote the following classroom goal?

Goal: "To increase the tendency to let things happen rather than make them happen."

(See page 37 for the other 11 stem behaviors.) Letting events happen rather than making them happen (with several exceptions mentioned later) is a way to increase social balance and harmony within a reasonable period of time. Zen's allowing things to happen is a difficult to define process. Zen helps develop stem behaviors. Zen has no sayable goals but these twelve behaviors are byproducts of Zen living. The practice of these twelve activities is evidence of aware, compassionate being at ease which is doing Zen. As Antoine De Saint-Exupery Said: "And I Would Answer You...That To Prepare The Future Is Only To Found The Present...For The Sole True Invention Is To Decipher The Present Under Its Incoherent Aspects And It's Contradictory Language... You Do Not Have To Foresee The Future, But To Allow It."

The stem behaviors require whole brain functioning which now requires much greater emphasis on right brain functioning than we have previously thought. Daniel Pink ( *Whole New Mind*) talks about six senses for personal satisfaction and professional success. They are: "Designing, Story, Symphony, Empathy, Play, and Meaning. They are developed by much greater emphasis on right brain functioning. He mentions: "Women's ways of knowing is

valid: feeling empathy and sympathy for others, taking the viewpoint of the one who speaks, seeking personal experiences and first person stories as important ways of learning, and embracing an ethic of caring.” Einstein’s thought and Zen practice greatly develop whole brain functioning with greater present emphasis on right brain since it has been neglected.

Stem learning helps us answer questions and helps one accept uncertainty about those questions that are difficult to answer. Note that Einstein remarked: “The important thing is not to stop questioning.”

Einstein was the type of person who enjoyed comments such as Woody Allen’s: “I am thankful for laughter, except when milk comes out of my nose.” Einstein often smiled. We learn to smile often by smiling often. Thinking of something funny can help bring a smile.

Smiling, after one smiles often, does not require much attention. Deciding requires attention. Some aspects of wise deciding are so simple that words are not adequate to contain them, and as a result, some people are not open to paying attention to their possibility. As Theodore Ruben said: “Kindness is more important than wisdom and realizing this is the beginning of wisdom.” That is an axiom which if practiced, one can experience open, self-direction, wisdom, and Zen. Einstein approached living a kind life and Zen promotes kind living.

In the new field of neural technology, Ronald Kotulak recently said: “...the human brain is poised to make its biggest evolutionary leap since the appearance of early man eons ago.” Brains and machines are now combined in new ways. The National Science Foundation, reported in “Converging Technologies for Improving Human Performance, that ‘super people’ are around the corner.”

Rodney Brooks of the Artificial Intelligence Lab at the Massachusetts Institute of Technology thinks that by 2020, "...brain implants will carry out thought-activated Google searches." Thought-activated Google searches imply knowing much of what one wants to know almost immediately. Brain implants are now in use. Arthur C. Clarke said: "Any sufficiently advanced technology is indistinguishable from magic."

If those are accurate predictions, we will need to improve open noticing in order to rapidly adjust. Accumulating more information (old identities) may not be the key. A strength of our evolution is sloppiness and imprecision, according to Diane Ackerman in her book (*An Alchemy of Mind*, 2004, Scribner: "We strive to be orderly, evolution doesn't. It adds on, tinkers, reuses parts. Evolution favors anything that works, no matter how wacky. It chooses easy over best, quick over precise. This doesn't result in perfect designs, but in good enough. When it comes to creative solutions, messy offers far more scope than tidy, and gadgets prosper where precision instruments fail.")

If we only do what is clearly specified, we will not have justice, open inquiry, freedom, trust, democracy, and people deciding for themselves, since those goals signify wholes that are not evident when looking at the sum of their parts.

We need the study of computer science and we also need the study of humanities. Computer science instruction is more like training than instruction in humanities (goals for computer science courses are frequently more specific). Harper's (Index) showed that only thirty-six percent of the students majoring in computer science agree that politics is relevant to their lives, whereas seventy-two percent of the humanities majors agree that it is.

## WHEN PRECISION MAY WASTE ENERGY

We often measure with a slowly stretching rubber band because of everything is in process. I suggest schools waste energy by not promoting open, quality guessing. Excessive striving for precision is similar to excessively wanting to know what will happen before it happens. Remember Tucker's finding that 90% of achievement in preparation and delivery of speeches is done in the first 10% of the time. If this holds true for other areas of school and university activity, as I think it often does, students and teachers would profit from exploring that phenomenon. Our desire to be overly safe can close us and retard our development. Some risk-taking regarding guessing is helpful for powerful open learning. Since much of daily life deals with unclear, gray areas, it is useful to search for tools to develop open, cooperative, imaginative self-direction.

At times, quality guessing requires courage. As Arthur Koestler said, "Courage is never to let your actions be influenced by your fears." And as Andre Gide said, "Man cannot discover new oceans unless he has the courage to lose sight of the shore." We can use what is known and "elements" of what is unknown. Using the unknown is accomplished by acknowledging the unknown and uncertainties, and making a decision to avoid fear while being curious about what is not known.

Kevin J. McKenna said: "At this rate of change, training is often obsolete before the term is over. The only appropriate approach is to be able to think creatively and freely." While our fund of knowledge is thousands of times greater than it was a hundred and fifty years ago, it is miniscule when compared to the predicted fund of knowledge twenty-five years from now.

Deciding whether to teach (or learn) one set of events, and omit another, is beyond training, and may best be learned by tinkering and adding-on with open, self-directed intuiting and quality guessing.

McKenna also said: “I'm inclined to think that openness can't be taught, but it can be learned. .... we get insecure about not having *an* answer to the things that perplex us and to relieve the anxiety, we plug the hole with something comforting either of our own invention or accepted in one piece from an ‘authority’. By the time we're at middle age we are completely plugged up with things that don't reconcile with our life experience. If we don't wake up, we live out our lives in a coma. If we're lucky we encounter something akin to a midlife crisis or at least some event to cause *questioning*, and we begin to remove the plugs and value the holes anew.”

Teachers can provide conditions through which openness can be learned.

What does our schooling need to help us determine what we need to know, and when we need to know it? Present-day schooling provides conditions so students do not know until authorities tell them they know. For a period of very rapid change, knowing we know very rapidly, without someone telling us we know, is needed. Much of what is presented as “education” in schools and universities is trivial and inconsequential for helping students to openly decide for themselves what will secure or endanger their freedom and well-being. If we learn to decide for ourselves, we often do so outside of classrooms. We most often learn to be cooperative and compassionate outside of classrooms.

Can we know quality in thought and statement? All rules, criteria, standards, and judgments must be intermittently re-examined (and perhaps transcended) lest they become trivial fixities. Justice Learned Hand said in 1941: “I often wonder whether we do not rest our hopes too

much upon constitutions, upon laws and upon courts. These are false hopes; believe me, these are false hopes. Liberty lies in the hearts of men and women; when it dies there, no constitution, no law, no court can save it.” The No Child Left Behind Act constrains rather than frees teachers and learners. We have been taught to obey the law, and usually we should, with exceptions like taxation without representation and other injustices such as preemptive invasion of another country and forced learning for tests.

Can we measure transcending? We often fear “transcending” yet as Kahlil Gibran said: “And if it is a fear you would dispel, the seat of that fear is in your heart and not in the hand of the feared.” Transcending this or that is difficult and knowing what and when to transcend is also difficult. Wanting to know in advance what will happen before we have an “experience,” frequently prevents an experience (other than deflection) from occurring. Too often we prejudge what will happen, and then decide that we already know what will happen before we experience. If we learn through experience, then we often fail to learn when we deflect and avoid experience. Experience only occurs in the present—now.

Transcending as I am using the term is not done out of fear or to avoid experience. Transcending as in Robert Kennedy S.J. transcending Christianity and Zen, is done to broaden experience and increase the adventure, and growth-producing aspects of experience.

Experts often know what cannot be done. They know partly because of preconceptions they hold. Some preconceptions close minds. A search for an educator’s mind opener helps us choose to focus on which hypotheses could profitably be tested since all hypotheses cannot be tested. This mind opening (educator’s zero) helps us formulate assumptions or approximations as a first step in creating the paradox of an “open mindset” which often determines behavior. The unnamed event/educator’s zero relates to open, imaginative

intuition, self-direction, and improved guessing. The best mindset may be no mindset. An open mind is not set. That which removes barriers to mind opening is itself a mind opener.

Extensions of Einstein's thought are many and varied. The extensions later proposed mesh with Einstein's view that if an idea does not appear ridiculous at first, there is no hope for it. As was mentioned above, experts often know what can't be done and some suggestions given later as extensions of Einstein's thought may be thought by some as ridiculous.

Einstein was, at times, certain that if the universe were not as he concluded, he thought "God" was wrong in the way the universe was made. At other times Einstein was tentative. Tentativeness may increase if teachers considered the possibility that there is more to our world than we can perceive, and more than we can conceive. Suppose further that the world, as Todd May says, "...overflows the categories of representation that the dogmatic image of thought imposes on it. This is not to say that particular categories are lacking something that other, better categories would give us. Our imagination must go further than that. We need to consider the possibility that the world -- or, since the concept of world is too narrow, things or being or what there is -- outruns any categories we might seek to use to capture it."

The old adage: "Don't just do something, sit there", is supported by Robert S. Hartman from his writing, "The Measurement of Value." He elaborates on what has earlier been said.

Our definition of value was that a thing was good if it fulfills its definition. The definition of a human being is in himself. Hence, a human being is good when he fulfills his own definition of himself. What does this mean? It means that he is morally good if he is as he is.

Just to be, in daily life, is highest maturity. Also it is very

powerful for it brings into play the infinity of your intrinsic self. To scramble around in the treadmill of extrinsic value is not only immature, it is inefficient. It shuts up your infinite powers and lets them lie idle. It prevents you from really living.

Einstein and Zen Masters agree. While Einstein did not mention Francis of Assisi, Francis' ideas can be seen as natural for one highly liberated from the self. Einstein may agree when said: "The true value of a human being is found in the degree to which one was liberated from the self." This liberation is carried to its highest level when Francis of Assisi asked to be an instrument of peace.

Francis went on to say: "Where there is hatred, let me bring love; where there is injury, pardon; Where there is doubt, faith; where there is despair, hope; where there is darkness, light; and where there is sadness, joy. May I not so much seek to be consoled, as to console; to be understood as to understand; to be loved as to love. For it is in giving that we receive, is in pardoning that we are pardoned, and it is in dying that we are born."

Francis' statements are the epitome of compassion which is the heart of Zen practice. Zen practitioners hold that one is born and dies every second or minute. Nothing is permanent.

The Francis of Assisi quote above is what he thought was the essence of the Gospel. Almost equally powerful to the statement above is Francis' statement: "Preach the gospel always. (do

what is said above-my note) Use words when necessary.” Francis was concurring with Thomas Henry Huxley said: “The great end of life is not knowledge but action.”

These are also implications of Einstein’s view of liberation from the self. Rather than teach/preach what is said above, that kind of compassionate behavior is best taught by modeling.

Francis was a highly aware, open, and self-directing. Einstein and Zen practitioners would hold that one does not need a god separate from the universe in order to practice the Francis way of being.

Learning is a natural activity. Rather than study how people learn, inquiring into how it is that some people do not learn may be a more powerful question to help illuminate human nature and one’s place in it.

Teachers’ and professors’ intentions to develop self-directing, open, creative students have been disregarded resulting in stultification of minds. Awareness of one’s present experience, as one is experiencing, is at the heart of what one does for developing open, self-directing citizens. We often learn without a specific intention yet an intention to accelerate learning may accelerate learning.

As M. Yunus said:

“We create institutions and policies on the basis of the way we make assumptions about us and others. We accept the fact that we will always have poor people around us. So we have had poor people around us. If we had believed that poverty is unacceptable to us, and that it should not belong to a civilized society, we would have created appropriate institutions and policies to create a poverty-free world.”

Let us consider that a general lack of present awareness may keep us from knowing that we can know without someone else telling us we know. A course found on the internet

(Sarbaum UNC Econ 201 Microeconomics) said: "What we need to do is explain to them exactly what it is they are experiencing. You know, "This is what you are experiencing, and this is how an economist would describe the situation." This implies that a student does not know what the student is experiencing until the teacher tells them what they are experiencing. How troubling not to know until an authority tells one. For chosen training, however, such an activity is fine.

The students' learning in Jacotot's report (*The Ignorant Schoolmaster*) provides some evidence of learning without explication by a teacher. A student, reflecting on the student's learning, has learned much without being told. This may be further evidence to support the notion that certain explanations by teachers may not be needed and may contribute to stultifying students' mental development when students don't decide for themselves.

Einstein was a very compassionate person. While he wasn't totally liberated from himself, he was less egotistical (free of a self) than the vast majority of people. Almost any expression of experience may be a compassionate sharing if one intends what one says to be for the good of everyone rather than for one's self. Einstein was more together than separate. Since we are all one, whatever one does that's good for the whole is simultaneously good for each of the parts.

We can be excessively scientific about some matters in the sense that science can more easily be done on that which is more easily measured. Wisdom, as in the Berlin Wisdom Paradigm, as written by Baltes and Staudinger in *The American Psychologist*, is an example of writing about topics that at one time were not given attention because of the difficulty in delineating what one was talking about.

It is difficult to write about extensions of some of Einstein's most important thought (liberation from the self). Einstein's view of William Penn's idea was not recorded. Penn said: "We shall pass this way but once. Any good, therefore, that we may do, or any kindness that we may show to any human being, let us do it now. Let us not defer nor neglect it for we shall not pass this way again." Einstein's thought meshes with Penn's.

Einstein's imagining himself moving with a light beam arose as a result of his imaginative, open thinking. Cartesian dualism led us to believe some events were absolute. Later experiments found Einstein's judgment (quality guess) about relativity to be true. Diane Ackerman tells us the evolution of our mind is not certain or tidy or precise.

The acceleration of the expanding of the universe (the universe seems to be expanding faster than was previously thought) is related to Einstein's fudge factor (cosmological constant). Acceleration itself seems to be accelerating.

"Wrong and "right" could be changed to "less powerful" and "more powerful" to better describe the acceleration of our accelerating mental evolution. One can say that when we allow ourselves to be less powerful at times, we may, in some ways, be more powerful. (knowing less of what is not the case helps us know more of what is the case.)

Accepting diversity in thought and behavior will increasingly include patience and knowing that one doesn't know since more than 90% of our mental functioning may still be unknown. As we inquire more into our mental functioning, we may find the old saying that "the more we know, the more we know we don't know" may apply.

The educator's equivalent to a mathematician's zero may function in helping us have a greater acceptance of more diverse mental functioning and greater acceptance of uncertainty as well as knowing that one doesn't know.

## TACTICS FOR USING MIND OPENING

When first using mind openers in classrooms, several conditions are needed. The first condition is the option for students to be involved in open inquiry. Students not interested may simply read a book in a corner. Some students, at first, will not be interested in open inquiry because of their mindset that what goes on in school is not for them and because many students have been trained to wait for others to tell them what is happening. All students must be freely involved and the teacher needs to mention that they will not be graded/evaluated for what they do during the inquiry session.

A second condition is the teacher tells the students that a discrepancy will be provided -- -- something they will experience that will turn out different from their expectations, and the teacher will not give the students the "correct answer" as to why the discrepant event occurred as it did. Discrepancies often vary among grade levels as well as among individuals in the same grade.

A discrepancy is then demonstrated or explained (preferably demonstrated) such as showing a two minute film with somebody holding a battery-operated fan behind a sailboat in a 6' by 3' tub of water, 30 inches above the floor. The students see the wind blowing the sailboat down the tub. The boat is pulled back and the battery-operated fan is then attached to a mount that is already attached to the sailboat, and when the teacher turns the fan on again, the students see that the boat does not move even though the sail fills with wind. Most

students are puzzled about why the sailboat didn't move the second time. The "sailboat and fan" discrepancy mentioned below can be used from grades 1 through 19.

The teacher will then answer any question to help students gain information to help the students build a theory regarding why the sailboat didn't move the second time when the fan was attached to the sailboat. If the student's question is an attempt to have the teacher give the correct answer, the teacher will then ask the student to think of what they need to know in order to explain the discrepancy to their satisfaction. The teacher will then tell the student what the student's experiment would find after the student mentally creates conditions for the experiment. Googling often helps with information necessary to explain difficult experiments. (Within 20 years, Brooks from MIT predicted we would have brain implants which would allow one to "Google" by thinking.)

After openly inquiring for a while, students note their own discrepancies and do thought experiments much as Einstein did. They also read and discuss to find answers for themselves. My experience in doing this with hundreds of groups from grades 1 through 19, shows that students learn to openly inquire while still being able to pass content type tests. Research by J. Richard Suchman has shown that students question asking facility as 50% Greater than students who were taught traditionally with much teacher-telling. Students whose primary goal of instruction was open inquiry, scored as well on standardized tests as students in traditional classes where "learning of content" was the primary goal.

#### ABOUT MIND OPENING

Many people pay little attention to events that are difficult to define. Einstein was not one of them. After studying Einstein's social thought one can find oneself exploring "openness," "cooperation," "self-direction," "compassion," and "minding." At the beginning of "minding" is an openness similar to an intention to be unafraid of what is mysterious or unknown.

Schooling (K-12 and 13-19) is overly narrow, and teachers and professors have become overly enamored with what "experts" think. Even experts have been taught to consider mainly that which is easy to define. Schooling often programs students to follow others' thinking rather than their own. Mind opening reduces negative aspects of groupthink. To paraphrase Einstein: modern schooling, when measured against reality, is primitive and childlike.

Einstein said: "Our task must be to free ourselves by widening our circle of compassion to embrace all living creatures and the whole of nature and its beauty." Schools can facilitate that widening of our circle of compassion by being open to receive. The process of opening to receive in the present embodies much of Zen. Openness to receive may be an Einsteinian mind opener; (an educator's zero) to improve receptivity.

A condition for using an Einsteinian mind-opener is a teacher with an open mind. If our minds are only open to the degree they presently are in schools and society, we can project that student development (and violence) will continue much as it is. Without additional mind opening, schools will continue the requirements for testing, and continue to have very little, if any, time for open inquiry. The Nation At Risk Report, did not increase the process of mind opening. The No Child Left Behind Act, seems to have accelerated the process of closing minds by promoting excessive specificity and excessive testing of trivia.

Another condition for a teacher using an Einsteinian mind opener is open inquiry on the part of the teacher. Most school boards and teachers have not made open inquiry a primary goal of instruction. As a result, most teachers have not had time for open inquiry in their schooling. School boards and teachers think that they do not have time for student open inquiry. They don't have time because excessive time is given to the old school mindset which holds that all required (material must be covered: material school officials believe students need to know for tests required by the No Child Left Behind Act). This common societal belief in very little, if any, time for open-inquiry in schools did not arise from openly inquiring. It arose from a programming to follow fixed and certain orders into which schools train its citizens including teachers. Are we primitive and childlike for allowing our schools to continue as they are?

Another condition for effectively using a mind-opener is the teacher's intention to open minds. This implies a belief that it is possible to open student's minds by providing conditions such as a freer environment, a responsive environment and a willingness to not give students correct answers to discrepancies. In order to intend to use a mind opener, a teacher must think a "mind opener" is usable and valuable. While it appears to be almost impossible to ride near a light beam moving at 286,000 miles per second, it is not a logical impossibility. With the kind of teacher training most teachers have had, it is difficult to intend to use a mind opener because most citizens, including teachers, have not had freedom, openness, and imagination stretchers in their schooling.

I mention these difficult to imagine conditions so as to better note that we can know process, time, and experience, without clearly defining (or imagining) them. We know an infinitesimal without clearly defining/measuring it. We can easily know specific processes (like baking a cake) specific times (like the time you had breakfast today) or specific

experiences (like the savory taste of the bacon sandwich you recently ate) but “process,” “time,” and “experience” are difficult to imagine or conceive because they are processes too vast to be clearly defined.

Even “mind” is not clearly defined nor is “open.” So it would not be at all uncommon to be confused about what "mind opening" might be. Einstein allowed himself to notice what is confusing. His confusion led to his sense of wonder, which led to his curiosity, which led to his open inquiry, which led to discoveries that were previously unimagined.

Gottfried Leibnitz and Isaac Newton, unbeknownst to each other, invented calculus simultaneously. A part of their creating calculus was inventing an infinitesimal. If we can invent a variable (an infinitesimal for instance) that takes on values immeasurably small, we can invent a variable that takes on values immeasurably large. As may be seen, this variable may function to connect disparate parts. Such connecting is a fusion. A barely formulated, barely discussed, what may be called an Einsteinian mind opener, could be a variable that takes on values arbitrarily close to infinity, or an event immeasurably or incalculably large to help create larger fusions. An Einsteinian mind opener (openness to receive, awareness, open inquiry plus provision or self-generation of discrepancies {wonder} at the appropriate level) is most comprehensive.

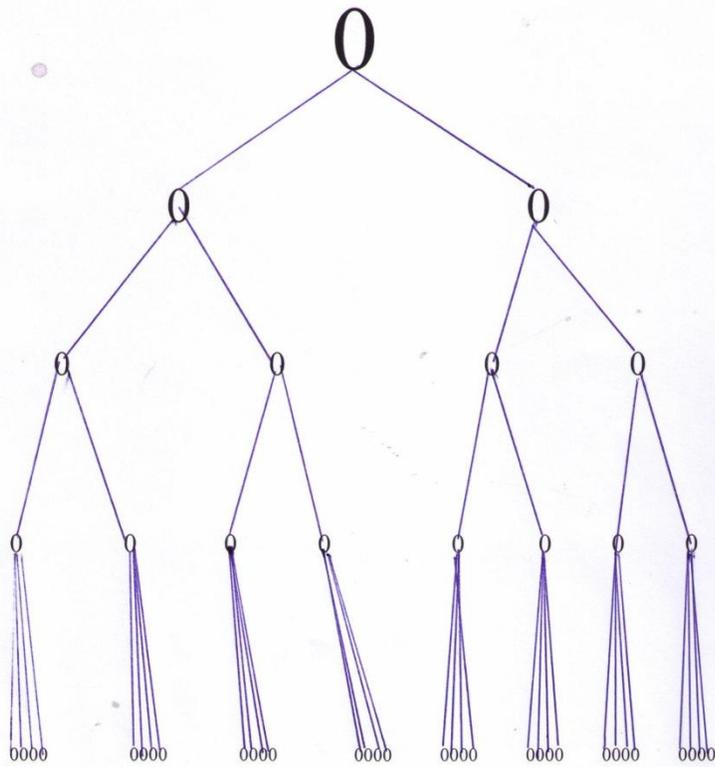
## DISTINGUISHING BETWEEN CONCEPTS AND THE PROCESS

### BY WHICH CONCEPTS ARE RELATED

The circles on the next page signify concepts. The smaller circles signify low-level concepts. Higher level concepts are signified by larger circles. The lines connecting circles signify the process by which concepts are related. Open inquiry throws out lines in all directions and when connections are made, a higher level concept is formed (indicated by a circle). The larger the circle, the bigger the chunk that is conceptualized. The top circle does not signify an endpoint, but rather, the point from which more lines are cast in order to create higher level concepts; larger chunks (more comprehensive thinking). The process by which concepts are related is greater than any particular concept. There is no end to open inquiry as there is no end to awareness.

Considering comprehensive conceptualizing, notice John Keats idea: “The only means of strengthening one’s intellect is to make up one’s mind about nothing—to let the mind be a thoroughfare for all thoughts.” The Upanishads, the core teaching of Vedanta (Hindu), cautions one not to conceptualize too little nor too much. Zen is the core of Buddhism. Moderation in all things, freedom, and compassion are central to Buddhism. One needs to balance one’s classic side with one’s romantic side. Without such balance one overly rationalizes which tends to close one’s mind. The core of what is said here about Zen applies to all Buddhism. Balance between right-brain and left brain is important for open inquiry as well as awareness of what is. Since schools have so greatly neglected right brain functioning, now is the time to overemphasize right brain functioning in order to hit it appropriate balance within the needed time.

Keats idea of “making up one’s mind about nothing,” may be reached by awareness using open inquiry to reduce excessive conceptualizing. Excessive conceptualizing may prevent present noticing. What can’t awareness and inquiry do?



The circles above signify concepts. The smaller circles signify low-level concepts. The lines connecting the low-level concepts to a higher level concepts, larger circles, signify the process by which concepts are related. Open inquiry throws out lines in all directions and when connections are made, a higher level concept is formed. The larger the circle, the bigger the trunk that is conceptualized. The top circle does not signify an endpoint, but rather, the point from which more circles are cast in order to create higher level concepts; larger chunks.

The process by which concepts are related is superordinate to any particular concept. There is no end to open inquiry.

Corrections to wording under diagram above

Fifth line third word from the and should be chunk instead of trunk

Fourth line from the bottom,  $\frac{1}{4}$  word from the left should be lines instead of circles

## Chapter 9

### GENERATING WONDER AND CURIOSITY

To Einstein, a worthy society provides free conditions for wonder, and open noticing of comprehensive events such as one's present experience, universe, and the mysterious. His thinking about schooling is the intellectual equivalent of a nuclear chain reaction. The chain reaction could cause a shift in emphasis toward open cooperation, inquiry, and compassion to improve self direction. Paradoxically, later clarifications help one note that increased self direction better permits one to practice stem learning one; increase the tendency to allow events to happen, rather than make them happen.

Einstein was a powerful learner who said: "I have no special talents, I am only passionately curious." Einstein researcher, Walter Isaacson, thinks Einstein's curiosity is the best place to look for what constituted Einstein's genius. Einstein's genius and curiosity spanned a range between everything and nothing. His genius, which extends beyond hard science to neglected aspects of cooperative social action, including schooling, is now becoming more fully uncovered.

Einstein's fundamental belief was that freedom was necessary for creativity. Part of his notion of freedom was liberation from the self (people are highly unified... free from being a separate self). Freedom from national boundaries is another of Einstein's thoughts. Vimilar Thakar said: "As long as we cling to the idea that this is "my mind, my own personal mind," we'll have a strong tendency to want to look as good as possible. But if we observe the mind, from a nonpersonal viewpoint, from the perspective of nonownership, simply observe our minds and how they function, we'll be less trapped by judgments."

Bill Isaacs said ( the author of "Dialogue and the Art of Thinking Together" and director of the Dialogue Project at MIT's Organizational Learning Center): "Listen to the course of the world and to your own nature; and you'll know what to do. Most people think that dialogue is a form of talking. It's more about articulating what's been heard and at what level. What are you actually listening to?"

Einstein's listening to the course of the world allowed him to favor a world government with a world police force to enforce world laws. Einstein thought imagination was more important than knowledge. Many Nazis were knowledgeable while being destructively fascistic using unaware judgment. Einstein's social thought was creatively and intuitively rational (more than simple rationality) as well as openly global. His social thought could help unite nations and groups that are now bitterly hostile and excessively competitive.

Einstein remarked: "The development of science and of the creative activities of the spirit, requires a freedom that consists in the independence of thought from the restrictions of authoritarian and social prejudice" (the opposite of many school and university classrooms). Einstein held that independence of thought should be a fundamental goal of government and a major purpose of schooling. Einstein's thought which provides a key to openness and social

harmony is: “Our task must be to free ourselves by widening our circle of compassion to embrace all living creatures and the whole of nature and its beauty.” Schools can facilitate the widening of our circle of compassion by focusing noticeably more on awareness of present experience, developing open inquiry, and individual judgment.

Einstein’s thoughts contribute to mind opening and freedom (including Einstein’s thought of liberation from the self). Extensions of Einstein’s thought includes ideas on how society may accomplish cooperative and compassionate social interaction through opening minds, and providing freedom.

Einstein’s ideas are comprehensive and open enough to strongly suggest that schooling begin with, and continuously foster, curiosity, freedom, and wonder so that students can think something that cannot be learned from textbooks. School time, suggests Einstein, is a time for freely mulling, imagining, mentally experimenting and allowing (consciously and unconsciously) various global and less global, connected and disconnected ideas to coalesce into a new, more comprehensive wholes. Learning skills to accomplish that goal is important but of secondary importance. Einsteinian coalescing of ideas as well as integrating ideas and feelings, implies openness which Zen facilitates.

If Einstein were writing about schooling today he might ask: “Will more words from lectures or textbooks help one find what can’t be learned from textbooks?” He may ask not only teachers and elected officials, but also citizens: “What do you wonder about? Take much time to openly wonder, imagine, and cooperatively notice what can’t be learned from textbooks; then experiment, cooperatively discuss more, read and openly notice. Be silent and just notice at times. Notice what people do more than what they say.” Einstein would also agree with Ananda Coomaraswamy who said: “The artist is not a special kind of person;

rather each person is a special kind of artist.” Einstein thought art and science are imaginatively integrated. Einstein knew the Hebrew holy writing, The Kabbalah, means “receiving.” He did not practice Judaism but he was very receptive and open.

At the beginning of this process of thinking something that can't be learned from textbooks is an openness to receive which is similar to an Einsteinian intellectual equivalent to a mathematician's zero.

Einstein wanted schools to change from a controlling manipulative force to a freeing one to facilitate openness to the mysterious (what can't be learned from textbooks). Opening to the mysterious is opening minds to know they don't know. Knowing one doesn't know is a condition for powerful learning. Coming to know that there is no grand narrative helps one know they don't know. Through self-direction, one forms one's own narrative for any given situation. These narratives often change. Only following one grand narrative at all times often promotes mind closing and what may be considered a kind of “fundamentalist” thought that is far from what is fundamental. Consciously avoiding worry, not being overly anxious about the unknown, (being open about what one is experiencing) helps one know one doesn't know. This openness helps one develop who and what one might become.

Since personal evolving or devolving operates until death, a person is always changing. As a person is changing so is any idea a person holds unless one is closed. Einstein knew that not only were powerful ideas incomplete, but that powerful ideas may be incompletable. Einstein knew that  $E = mc^2$  was incomplete and that  $E = mc^2$  did not unify gravity with other known forces.

Kurt Gödel's incompleteness theorem in mathematics applies to any logical system. As a person is changing so is any idea a person holds. As Marcel Proust said: “The real voyage of

discovery consists not in seeing new landscapes, but in having new eyes.” Might those “new eyes” help us notice what might be considered darkness visible? The darkness visible maybe a glimpse of what is only partially seen. What may be worthy to see with greater clarity? One’s noticing one’s present experience would help answer that.

Evidence for the need to update open, cooperative schooling can be seen by noting that machine evolution (using computers and genetic algorithms to evolve in relatively few days what may otherwise take millions of years) has accelerated to the point where machines are now inventing machines. (MIT’s Gershenfeld created machines which are building machines, not inventing them.) John Koza’s machine invented something that the U.S. Patent Office considers inventive (a condition for getting a patent). The patent office didn’t know Koza’s patented project was invented by a machine.

May human/machine units be capable of infinite invention? Does “infinity” lose or create more wonder when we note that the mathematician Georg Cantor found that some infinities are bigger than others? How powerful, and unknown is “infinite?”

The need for updated Einsteinian schooling can be seen in the work of those involved in algorithmic genetic evolution who believe that the test of their creativity will come in search of problems to solve. But genetic programming cannot determine what people need and want. Our needs and wants determine our problems. We now need neuro-lawyers since brain imaging is now being used in courts by criminal defense lawyers with that prefix. Wants may later be viewed as causes of suffering.

W.E. B. DuBois spoke of the “Color Line” of the 20<sup>th</sup> century, and Patel, (*Acts of Faith*-2007) spoke of the “Faith Line” of the 21<sup>st</sup> century. Einstein alludes to a universal, all-century, unity of people and nations beyond the United Nations to a world government where

cooperation, justice and compassion for one's fellow beings are understood by most as best for all.

Patel speaks of Faith Line where one faith, the "fundamentalist" faith type, is "totalitarian." Patel thinks totalitarians use "faith" to convert or destroy others who do not believe as they do. The other side of the Faith Line includes "pluralistic" faith types who use their faith in a cooperative way to work with and accept the beliefs of others. (Such as evinced by The Multi Faith Council of Northwest Ohio whose covenant reads: "I vow to consciously grow in the understanding and compassion that will encourage me to live peaceably with all my neighbors.")

Pluralistic types are more often schooled in open self-direction and hold that following one's honest thinking is a quality way to live. Fundamentalist/closed types seem to hold that what they learned (as a static truth) applies to all people all the time, and only "following one's honest thinking" is wrong if it varies from the fundamentalist's truth. Einstein did not use the word "honest thinking" but his view of self-direction has a similar effect.

Einstein was clearly with DuBois about the color line and with pluralistic "faith-types" regarding cooperation/compassion for all, including those with "no faith." "No faith," is often only a different faith that is often called "no faith" by those who believe in God as a being separate from the universe. Einstein didn't call it a "mind line" but he certainly would be on the "open mind" side as opposed to the "narrow mind" side.

Einstein's thought was unusually broad and open so as to avoid "siding," except when he considered passivity and war (he was aggressively passive and clearly for world government). Uncertainty (confusion) was common for Einstein and may have been the generator of his curiosity. His openness was so extensive that it is difficult to be certain of his limits. There are

limits to  $E=mc^2$  but the limits are uncertain. As noted earlier, Scientists found that only 4% of our universe is energy and matter as we know it. The other 96% is dark energy and dark matter. Could  $c^2$  of dark m exceed the square of the speed of light? No one knows what applies to dark E or dark m. Einstein's social thought may be even more open in a highly accepting way. One physicist mentioned no substance can move at the speed of light since it would take an infinite amount of energy to do so. How  $c^2$  can occur when substance can't even move at c is beyond me. Energy has a different definition than matter. Is there an in-between point at some speed where matter is not yet quite energy nor still matter?

Once there is noticeably wider agreement that openness, awareness, curiosity, cooperation, and self-direction are primary goals of schooling, "training" will not be neglected but will not be given the vast amount of time schools now spend on it. With openness, awareness, cooperation, and self-direction as primary goals of schooling, curiosity and wonder are present. Breakthroughs in schooling will arise near a time when machine intelligence exceeds human intelligence (shortly before 2030 according to award winner Ray Kurzweil). An Einsteinian mind opener is posited to provide conditions through which humans and machines can live together amicably. Kurzweil predicts, neural implants will create interesting person/machine beings.

Kurzweil believes that there will be no problems in people/machine relations since people will want carbon and machines will want silicone. Both are made of atoms and there seems to be enough of those for everyone, but who knows? An Einsteinian mind opener may develop students and citizens so well that most student/citizen needs and desires create conditions where these inventive machines will be "standing" around idle since problems related to needs and desires may be relatively few.

More evidence for the need for Einsteinian mind opening is noticed through Princeton's Professor Elizabeth Gould's research, (February 2006 issue of Seed). She reports on neurogenesis (the generation of new brain cells) as fact. Previously scientists thought that brain cells did not generate in adult or animal brains. In the Structure of Scientific Revolutions, Thomas Kuhn wrote: "...until the scientist has learned to see nature in a different way, the new fact is not quite a scientific fact at all." Physicist, Fritjof Capra said Leonardo DaVinci's lack of university training freed him to go directly to nature to observe.

Begley reports that thoughts can physically change the brain. Until recently, scientists thought that was near impossible. She said Helen Mayberry found that "placebos work the same way on the brains of depressed people as antidepressants do." Kotulak's research on brain implants shows thinking can move immobilized artificial arms.

Begley mentions that attention is crucial to brain changing and that mental training can create an enduring brain trait. She reports that brain gamma waves are a signature of neuronal activity and that neuronal activity of gamma waves "mix together far-flung circuits—consciousness, in a sense." This mental training is a subset of schooling but not to be mistaken for developing present awareness and open self-direction. Her mental training was done with volunteers which places the activity done in the category of "education" even though she uses the word "training." The subjects of the study were of course not graded or evaluated as far as I know. They were not competing with each other. Most schools require training and as student choice is not often involved, school activity is more "training" than "education."

When attention is crucial to schooling, we need to pay more attention to the beginning of attention which is openness to receive what can possibly be given attention. An Einsteinian

mind opener could profitably be given more focus by using a wider and more penetrating Einsteinian lens which changes what one sees. Anais Nin, said: “We don’t see things as they are. We see things as we are.”

Richard Clarke, security adviser to Presidents Clinton and G. W. Bush, notes we will be creating our own evolution through nanotechnology, genetics, brain implants, and other technological advances. Clarke thinks humans can change not only how we are evolving, but also what we are evolving into. His profound thinking and experience coupled with technological break-throughs is strong evidence for the need to focus additional attention, as Einstein thought, on schooling for self-direction and open, curious, cooperative behavior.

Extrapolation of Einstein’s thinking leads some scholars to think that involvement in the process of unifying everything is as close as we can come to any unification. Any unification would need to include “the process of unifying” which leads to incompleteness (infinite regress) since the process is continuous and ongoing.

Connected to this is May who asks us to consider that “what is” (what exists) may be more than we can perceive or conceive. Ackerman tells us the evolution of our mental functioning is not certain, not tidy, nor precise yet schooling trains students to be certain, tidy, and precise. Considering, and even being open to consider, what is not certain, untidy, and imprecise is at best very difficult, and may appear impossible for some who now graduate from our schools and universities.

There is evidence that the governmental-industrial-complex wants schools (not always consciously) to impart disconnected information to maintain the status quo ( for the elite to keep power) by keeping us in the dark. Those in power are difficult to expose because of

their secrecy. May says that Michel Foucault thinks it is easier for us to determine who lacks power rather than to determine the specific individuals who hold it.

Einstein's and Smith's thoughts coincide with The Dalai Lama who said: "I believe that to meet the challenges of our times, human beings will have to develop a greater sense of universal responsibility. Each of us must learn to work not just for oneself, one's own family or nation, but for the benefit of all humankind. Universal responsibility is the key to human survival. It is the best foundation for world peace." Einstein would agree.

Discovering who we are and who we might be are natural, worthwhile, incomplete, and often confusing. Sitting children at desks to listen to someone for six hours, five days a week, does not contribute to maximizing student development of open curiosity and cooperative, self-direction. The modern methods of instruction, referred to by Einstein, contribute to developing narrow-minded conformists. An easily seduced consumer is more readily formed through much of present-day schooling. Many modern methods of instruction often stifle open inquiry. Open inquiry involves "the uncertain, incompletable, mysterious" which the elite and many citizens have been taught to fear.

We may be surrounded by a boiled frog syndrome. Ornstein found that by placing a live frog in a pot of water at room temperature, and then very slowly heating the water until it boiled, the frog would die because the frog would not notice the gradually increasing temperature. Our society is not noticing the growing emphasis on closed, impersonal, competitive socializing/schooling which fosters social neglect for developing openness, curiosity, cooperation, wonder, and self-direction.

Einsteinian mind openers promote the idea of Ghandi who said: "All humanity is one undivided and indivisible family, and each one of us is responsible for the misdeeds of all the

others. I cannot detach myself from the wickedest soul.” With Spinoza, Einstein saw the universe (all of harmonious nature) as God. Ghandi, a Hindu, may or may not have held a different view of God but Einstein, I believe, would have agreed with Ghandi who remarked: "If you don't see God in the next person you meet, it is a waste of time looking for him further." Einstein thought that each person is an integral part of nature.

New axioms may be needed before Einsteinian open schooling noticeably increases, openness, cooperation, self-direction and freedom. One powerful axiom may be that an Einsteinian mind opener is an aware, present intention to greater openness, self-direction, cooperation and freedom. We learn to be open, cooperative, self-directing, and free by being open, cooperative, self-directing and free.

Einstein said: “Only the individual can think, and thereby create new values for society and may even set up a new moral standards to which the life of the community conforms. Without creative, independently thinking and judging personalities, the upward development of society is as unthinkable as the development of the individual personality without the nourishing soil of the community.”

Mind-opening is developed by stem learning which simultaneously develops mind opening. Stem learning generates stem behavior. Freedom is a “stem” of stems as is awareness. Schools are often not concerned with freedom, openness, awareness of students’ present experience, or paying attention to that which is difficult to define. Schools deal mainly with identities which can be clearly told and easily measured, and as a result, schools are not preparing students for a rapidly changing, difficult-to-express world. François de la Rochefoucauld said: “Almost all our faults are more pardonable than the methods we think up to hide them.”

More open, free schools use goals that are known but are difficult to describe and measure. It is difficult to measure what will secure or endanger one's freedom. Measuring whether students have an increased tendency to "allow things to happen," rather than "make them happen," does not have clear-cut edges. When a teacher's goal is to increase students' tendency to "allow things to happen, rather than make them happen," the teacher frequently provides conditions whereby students learn to let go of inconsequential behavior into which they have been programmed. Growth-producing, self-directing, imaginative behavior often emerges with students in free schools. Zen practice facilitates this process. Zen is simultaneously the means and the end. The journey and the destination are one as the wave and the ocean are one. Lao Tzu mentioned that an open traveler is not intent on arriving.

We know that stem cells help generate other cells where other healthy cells are needed. We would be fortunate to have behaviors which help us learn how to live with cooperative compassion. If there were an event like stem behavior, the stem behavior could generate other quality behaviors needed in a variety of circumstances. Stem learning generates stem behaviors. Stem learning arises more easily if we have stem goals. These stem goals help us move towards a variety of cooperatively compassionate behaviors that are helpful for everyone.

Stem ways of learning help students make more connections, and allow for more exploration of the unknown. From the stems, a variety of growth-producing behaviors and catalytic ways of learning emerge.

"A table, a chair, a bowl of fruit and a violin;" Einstein says: "What else does a man need to be happy?" Einstein continues with: "I believe that a simple and unassuming manner of life is best for everyone, best both for the body and the mind." Living the questions and

accelerating contentment with their answers, or accepting uncertainty arising from no answers emanates from psychotherapist James Guinan's twelve stem goals. These stem goals encompass a simple and unassuming manner of life, as Einstein suggested, and they embody a contagious Zen-like element capable of initiating a chain reaction.

#### FROM EITHER/OR TO BOTH/AND

Begley reports Steven Pinker's research shows: "Many human genes are changing more quickly than anyone imagined. If things that affect brain function and therefore behavior also evolve quickly, then we do not have stone age brains that evolutionary psychologists oppose... (then we) may have to reconsider the simplifying assumption that biological evolution was pretty much over 50,000 years ago".

"Harvard's Daniel Gilbert believes that people are happier when they can change their minds. But in 2002 he and a colleague discovered that people are generally happier about their irrevocable decisions: once you are locked in to a decision, you tend to focus on its positive aspects and ignore the negative ones. But if you are about to change your mind, you ruminate on both the positive and negative aspects of the choice, which makes us happy. Inspired by his findings, Gilbert proposed to his girlfriend. Since the 'till death' vow makes marriage an (almost) irrevocable decision, the result is that 'I love my wife more than I loved my girlfriend.'" Choice permits decision and decision generates dissonance. Avoiding dissonance may be that which made subjects of irrevocable decisions happier.

The beginning of Einsteinian learning already contains what facilitates unlearning of that which keeps a mind closed. This view of learning to learn also takes a position that when the learner unlearns what inhibits his or her present learning, the unlearning reduces that which was prohibited from entering awareness because of outdated mindset(s).

At this beginning stage one is asked to consider another way of thinking. At first, it may seem somewhat nonsensical but you are asked to accept some nonsense at the beginning since you are learning something new. Only a whole makes perfect sense. Zen is more than what is expressible. This Zen way of thinking holds that achievement gains nothing, and loss loses nothing.

Kaplan calls Zen a philosophy, but paradoxically, many would say Zen is no philosophy (some Zen practitioners hold Zen is the opposite of philosophy- conceptualizing may hinder Zen experience). In an attempt to search for an educator's equivalent to a mathematician's zero, the practice of this "philosophy" may be called Zen. Kaplan asks his readers to relax their efforts to grasp Zen. It is best, at this early stage of speaking of Zen to expect some nonsense when viewed from the Western way of knowing. The Zen way, according to Kaplan, "is to move you more like a river on a path that has not been charted previously. As the river flows, the path is created. The river will reach the sea, and this is how life should be. There are no maps to be given to you which are to be followed. Just be alive and alert, and then, wherever life leads, you will go with full confidence in it. Trust in the life force. Allow it to lead you towards the sea." Zen allows you to move rather than moves you as Kaplan suggests.

When examining one aspect of this both/and view, it is worthy to consider Michael Polanyi's, Tacit Dimension: one can know more than one can tell, one may be able to know a

sense of everything without being able to tell about it. Another Zen sense of “the both/and” is when one knows nothing, one knows everything that is needed to be known. (When one is empty, one is full—you cannot be empty when you are a part of fullness). The flowing river does not need to know in advance where the next curve is so that the water will turn at that point. The water will naturally turn because of the landscape ahead which is not known at present.

Extrapolation of Einstein’s thinking leads some scholars to think involvement in the process of unifying everything is as close as we can come since the universe, according to J. B. S. Haldane, “Is not only queerer than we suppose. It is queerer than we can suppose.”

## ONE WAY TO BEGIN TEACHING TEACHERS

One way an open teacher of teachers may begin their first moment of their first class is to briefly say: (as times change so do the teachers opening remarks). Students who have experience with free schools may simply continue to learn what is interesting, remarkable, and important for them.

For students who had coercive teachers in traditional schools ( most of us) the following beginning in is one way to begin a class for students studying to be teachers: Say:

“Have I begun to teach?”

The open teacher would pause and wait for a response. If no one responds sooner, after a minute or two of waiting, an open teacher might say: “I notice no one has yet responded.” If

someone responds, the open teacher openly responds to their response, with their goal being increasing student awareness, open inquiry, and self-direction of their students. An open teacher would be very careful so that no student is embarrassed or afraid to say anything.

The open teacher would introduce her or himself by mentioning some personal characteristics such as “most of my clothing is used.” The open teacher may sometimes mention personal matters such as: “At an earlier time in my life I wore used underwear.”

The open teacher arranges for students to at least get to know each other's names.

The open teacher may make it clear that attendance is mandatory and that many other things about the course, including grading, are open for discussion.

The open teacher may then mention something about differences between “training” and “education” and then ask the students if they would like to learn more about how to become more open, more inquisitive, and more self-directing.

The open teacher may say a few other things to help the entire group get to know each other better through an open discussion. After a while, the open teacher may then ask a student, calling the student by name, ( use of big name tags in the beginning of a class is helpful). The open teacher would say to that student: I would like to know what you want to learn and/or what you are thinking and feeling “now.”

Since the open teacher would not know in advance what that student would say, the open teacher carefully notices what is going on, and is open to the possibility of creating additional awareness and conditions for open inquiry within that individual student and possibly other students.

Other students would be watching and some of them may be positively influenced by the different way this teacher is operating. Some students, of course, would be turned off, partly

because students have been trained to have teachers tell them what they need to know to get a good grade. Some students may be turned off because the open teacher was not training students or because the open teacher was not giving student specific facts. Because students have infrequently experienced this more open approach to becoming educated, there is frequently a higher initial interest because of the newness.

Some students would soon be asking what they had to do to get a good grade. Questions like, “What is going be on the test?” and “How many pages do I have to write?” would probably be asked. Questions about the tests and how many pages need to be written are often asked by those who are primarily "students"/trained as opposed to "learners" who are more inquisitive and interested in getting better answers to questions about matters that they think are remarkable, interesting or important for them. Often "learners" are more interested in finding out how to find more peaceful, less stressful living (part of which is earning a meaningful living and how to be appealing to themselves and other people).

"Students" appear to be primarily interested in grades and "learners" are more interested in satisfying their curiosity. "Learners" more easily become engaged in playing with ideas and expressing what they are thinking and feeling at any given moment. "Students" want to be told what it is they need to know in order to get a good grade.

If a student replied that he/she wanted to be more openly self-directing, the open teacher might ask the student what was holding up her or him up from being openly self-directing right now? "Learners" may think about an answer for that question. “Students”, would probably attempt to manipulate the teacher into telling them what it is they need to know or do to get a good grade.

The student may then reply that they didn't know what is keeping them from being openly self-directing. The open teacher one might ask: "What's wrong with not knowing?" Again, one would not know what the student would say and the teacher's next response would be dependent on what the student did say. One would also encourage the entire class to be involved in the discussion ,where at this point, the teacher will state that there are no right or wrong answers, and no points would be taken off for dumb statements or questions since there is no such thing as a dumb question. Adding: "no points be given for what is commonly considered a good question." One encourages students to give themselves permission to make mistakes. Giving themselves permission to be wrong, or even look foolish, probably increases their chances for genuinely being themselves. Genuinely being oneself is a sign of wisdom.

My contention is that teacher training infrequently deals with providing conditions whereby the student (a future teacher in this case) may facilitate their future students to become more aware of how to be self-directing and openly aware. Being open to experimenting with different activities to accomplish that goal are often worth the effort and time. This is true for any "subject." Too often teachers have forgotten that the subject of the course is the starting point for powerful learning which often includes open inquiry beyond the "subject" and understanding what can't be learned from textbooks.

Another way according to Ricci with whom I agree is to give grades to students as the class begins so that the motivation for learning will not be for grades or degrees. Grading often produces students. Having a grade before the class begins, permits learners to experience "freedom to learn." We learn to be free by being free.

Another example (previously published) of how an open teacher might begin his class follows. It is an edited version of psychotherapist, Dave Doane, teaching on the first day of his college freshman psychology class. There are many ways to do what Doane is doing. Similar ways could be done even in early grades. It is projected that Einstein would find Doane's and Ricci's ways are worthy and important.

#### ANOTHER WAY-- DOANE'S CLASS

Dave: Right now I'm sharing my now. Thoughts about school and hopes about how I hope we will be together keep occurring, and I'm choosing not to talk about all that now. — pause— I feel kind of strange—like why am I talking at all? What's going on, anyway? Yes, what's going on, that's my start.

Silence: 30 seconds

Dave: I'm aware of silence. You all are looking at me. You all are sitting in chairs, in straight lines, facing this part of the room and not one another, and you're very silent, like something pretty important is going to happen up here, and you're all going to audience it. And I walked right into this important part of the room like this is where I belong, and you're all silent, and I'm doing the talking. The stage is set.

Silence: 15 seconds

More silence: 30 seconds

Dave sits at the edge of the desk and looks around at people looking at him.

Dave: I notice your arm is raised.

Student A, lowering his arm says: “Is it okay if I ask a question?”

Dave: You just did. I noticed your arm was raised, I said that I noticed that, then you lowered your arm and asked if it’s all right for you ask a question.

Student A: Well, what I want to know is, is this part of the class? You’re the teacher, aren’t you?

Dave: Yes, I’m the teacher. Oh, I get it—being a teacher means to you that I’m supposed to do certain things, like say if something is a part of a class or not.

Dave: Now I notice some grinning and laughter. Now I notice it’s stopping. I said I notice it, not to stop it. I’m feeling pretty powerful in here—a feared kind of powerful.

Silence: 15 seconds

Student A: Well, all I wanted to know is what we’re supposed to be doing, and you...

Dave: [Dave interrupts student A and says] What you are doing is you are asking someone to tell you what you’re supposed to be doing. Do you understand what I’m saying?

Student A: How can I say anything? No matter what I say, you don’t like it.

Student B: He wants you to say what you want.

Student A: I want to know what’s going on.

Dave: What’s going on is you’re asking someone else to tell you what’s going on, and you’re asking a lot of questions. Try making statements instead of asking questions—statements about what is going on for you, what you want, what you notice.

Student A: We’re just going around in circles.

Dave: See, you don’t need someone else to tell you what’s going on for you.

Another student raises a hand. Dave notices it and says:

I notice you've raised your hand, and I predict you will speak as soon as I stop talking.

Student C: Can I ask a question about the course?

Dave: I was right. Now look, you just did ask a question so I am sure you can ask a question about anything you want. I'm also sure you're wanting my permission, but you don't need my permission and I'm not your permission giver. I'm your teacher. I do wish you'd speak when you want to speak and make statements instead of questions.

Student C: How can I learn anything without asking questions?

Dave: That's a question.

Student C: Well, I don't think you can learn without asking questions.

Dave: OK.

Silence: 30 seconds

Student D: What's your name?

Dave: I'm Dave Doane.

Student C: Are we going to use a textbook?

Dave: It seems that some of you are asking a lot of questions about what you're supposed to do and what you have to read, and some of you are trying to program us with all kinds of "have-tos" and rules that you want me to make and all that makes it pretty hard for you to be students and for me to be a teacher. Clever game—eliminate all hope for education on the first day. I am sure that if I do what you're telling me I'm supposed to do, you'll end up making me into exactly the kind of teacher you hate.

Silence: 30 seconds

Student A: But that's the way we've been conditioned. You can't expect us to change the way we've been taught for over 12 years in one hour.

Dave: Yes I can.

Student A: Well, it won't work. It's...

Dave: It is you. Try, I won't work. I...

Student A: No, I'm willing to try it—it's just that we've never done anything like this before and...

Dave: And that's where our hope lies, just like learning and life. Program it and it's dead. You know, I notice your willingness and hope, on the one hand, and your certainty that we can't do it on the other. I'm noticing a lot of people sitting and watching and listening to me. I also notice I am doing most of the talking and being higher than any of you, and being pretty central in here, and I am wanting to make contact with more of you.”

What frequently happens in classrooms is the opposite of what Doane did because Doane did not follow the almost unconscious outdated “teacher mindset.” Einstein and Doane did not follow a set curriculum. While Einstein didn't, as far as I know, express his experience as Doane did, Einstein also refused to follow the outdated “teacher mindset.” Both Einstein and Doane, facilitate student thinking that can't be learned from textbooks. More of Doane's ideas are:

“Learning starts with the learner. It's the learner who makes the teacher and not vice versa in that my learning in response to you means you are my teacher. A teacher is not really a teacher unless I am learning from him. School and education are separate phenomena. They may overlap a little or a lot, but they are certainly not the same. I learned that ‘nothing worth learning can be taught,’ it can only be learned, and I believe that.”

Einstein and Doane realized outdated school mindsets require students to primarily follow rules. Einstein and Doane, having open minds, minimize rule following. They also use their whole brains rather than primarily their left brain hemisphere. Their right brain hemispheres have been noticeably developed better than most. Doane is a psychotherapist and his education involved more whole brain functioning.

Some experienced educators think many teachers of teachers think they should tell students what it is the teacher thinks the student needs to know in order for students to be good teachers. Many teachers of teachers then repeat what their teachers told them and what they have read about effective teaching (often related to the antiquated teacher-telling mind set dealing with students remembering content to pass tests).

The same is true for the teaching of other courses beyond teacher education. In some industrial arts courses which often “train”, safety constraints, when using powerful machines, are needed. These constraints limit freedom but only temporarily until the student learns to safely and appropriately use what may be considered dangerous machines.

“Effective” teaching is dealt with more often than is “good” teaching. As some leaders have said, to be effective, doing “it” right is important. To be a “good” teacher, it is important to do the “right” thing (educate rather than primarily train unless the training is chosen by the learner). To be a good teacher is to do what is "right" rather than only rightly do what you were told to do.

Doing what is "right" is not to teach for a test as The No Child Left Behind Act encourages teachers to do. Doing the “right things” (helps students become openly self-directing and wise may be done in a variety of ways). Experimenting with activities to help students

become self-directing and openly aware is an example of doing the “right thing.” When doing the right thing, one becomes openly self-directing.

Dear H. A,

One way of noticing the degree to which the top 6% of the world’s population are trained, as opposed to educated, is to notice they own 59% of the world’s wealth while 53% of the world’s population lives on \$2.00 a day or less. Matt Miller in his Tyranny of Dead Ideas reports that only 14% of the world’s population can read and 13% are hungry or malnourished. The highly schooled 6%, if educated, would not allow 43% of the world’s population to live without basic sanitation or 18% to live without an improved water source or allow only 12% to have a new computer, or allow only 3% to have an Internet connection. Only 7% of the world’s population have been schooled at the secondary level. Could excessively competitive schooling contribute to what Einstein thought was the absence of the true value of the human being; the lack of liberation from the self?

It is not disputed that all of the world’s religions profess to treating other people the way they would like to be treated. The statistics above indicate an excess attachment to self and an unwillingness to share. The self-direction spoken of by Einstein and Zen practitioners is a compassionate self direction which liberates a separate self and therefore, promotes selflessness rather than selfishness.

What if the chair of teacher or professor search committee, or a even a university presidential selection committee, suggested to the committee that they ask a potential

president or teacher/professor to attempt to steal one of the interviewer's pens and/or to try to catch some flies during the interview?

This is not a silly request since some playfulness and humor are valuable characteristics of school and university personnel. What if committee chair further suggested that the candidates being interviewed primary role was to serve students?

Don Conable, who conceived these and other unusual interview procedures, mentioned that points are awarded for attempting to steal the pen and catch flies. The procedure is designed to show some difficult to determine qualities such as spontaneity and willingness to be open to surprise and new experience. Points are taken off for no attempts to steal the pen or no attempts to catch flies.

Now, when financial, economic, and social problems are extensive, noticeable change appears to be needed. In order to bring about needed change, we may need to hire teachers, professors, and administrators who are more open to change as well as be models for openness, kindness, and cooperation. As Theodore Ruben said: "Kindness is more important than wisdom and when you realize that you have the beginning of wisdom." These unusual interview procedures may help schools and universities hire wise people who model playing and laughing, th among other qualities.

Hiring open, playful, humorous teachers, professors, and administrators seems to optimally challenge students and society to help update social and economic concerns. Some silliness and noticeable difference can be viewed in one who is open, playful, and humorous.

Years of experience can lead one to think there is a greater chance of being open and humorous when one does not feel an excessive need to hide one's characteristics and qualities (such as when one is not overly afraid of being foolish). Dale Carnegie encourages people to

allow themselves to be foolish for two minutes per day. As Thomas Edison said: “If we did the things we are capable of, we would astound ourselves.”

Openness can generate humor, as humor can often generate openness. Most of our previous schooling and university training has taught us to be quite cautious about appearing to be silly, playful, or out-of-the-ordinary. Schools and universities have trained us to think that others, rather than each of us, will bring about the needed personal, social and economic change. We have been taught to wait for others to do what needs doing.

Education requires some training, but what now needs change is the degree to which we are trained to think as others do. We need more education for self-direction rather than following what others think. Quality professors provide conditions which tend to increase the chances of aha's arising in student's minds. Ahas! often precede needed change. An aha! often requires imagination. That may have lead Einstein to believe that imagination is more important than knowledge.

The humorous attitude I write about does not necessarily relate to being funny or telling jokes, but rather, to being open. Being open often relates to being open to one's present thoughts and feelings including ones fears. Being open also increases the chances of having empathy with the people with whom you are communicating. Being open permits one to follow one's own authority which, in turn, allows one to reduce their obedience to another's authority.

Those who have the greatest potential for openness are the ones who most accept themselves as they are. One can more easily accept oneself as one is when, as Dale Carnegie implied, one allows oneself to be foolish for two minutes a day. Frequently, when being

foolish, one is foolish for 10 or 15 seconds here or there. Two minutes of being foolish per day is a relatively long time.

When you are being foolish, you don't have to wonder whether people are thinking you are foolish because you know they think you are at that time. Not worrying about whether others think you are foolish and your self-acceptance during your two minutes of foolishness can be liberating and opening. Such liberation stimulates imagination in ways which not only contribute to excellent leading and teaching, but also to creating conditions for optimal change.

Accepting oneself as one is, with some imperfections and foolishness, can help one grow, develop, as well as help one think something that can't be learned from textbooks.

Another interesting person I have read is Stephen Batchelor. He says Zen practice is dharma practice and: "The task of dharma practice, is to sustain this perplexity within the context of calm, clear, and centered awareness. Such perplexity is neither frustrated nor merely curious about a specific detail of experience. It is an intense, focused questioning into the totality of what is unfolding of any given moment. It is the engine that drives awareness into the heart of what is unknown." An aspect of the perplexity he speaks of relates to functional discontinuity and structured disadvantage. The Zen master does everything in a relaxed, calm manner. Paradoxically, the experienced perplexity is barely perplexing. J. Richards Suchman spoke of the perplexity as productive tension. One can also be productively, yet calmly tense with a violin, a bowl of fruit, a table, and a chair.

Cordially,

Albert

## Chapter 10

### WANDERINGS OF A CALF

The following anonymous poem about a calf walking through woods is used to make a point about awareness and different kinds of knowing. The poem is interspersed with extensions of Einstein's social thought potentially helpful in mind opening and learning to think what can't be learned from textbooks.

One day thru the primeval wood  
A calf walked home, as good calves should,  
But made a trail all bent askew,  
A crooked trail, as all calves do.  
Since then three hundred years have fled.  
And I infer, the calf is dead;  
But still behind he left his trail,  
And thereon hangs my moral tale.

Some additional thoughts about blending East Asian (Chinese, Japanese, and Korean) with Western thinking to help lead to a more powerful integration of Eastern and Western thinking can be seen by using this poem. A more powerful integration of Eastern and Western thinking

would generate more awareness to avoid following the random wanderings of a calf. Or if one did follow with awareness, one would be aware that following such wanderings may be as beneficial as what is it normally thought of as Western ordered path-making. It is projected that Western ordered path-making has excessively attempted to make things happen, rather than allowed them to happen. One destructive example of making things happen, rather than allowing things to happen is the United States preemptively attacking Iraq. Einstein held that any killing under the guise of war was still murder.

The trail was taken up next day  
By a lone dog that passed that way,  
And then a wise bell-weather sheep  
Pursued that trail o'er dale and steep,  
And drew the flock behind him too,  
As good bell weathers always do,  
And from that day o'er hill and glade  
Thru those old woods a path was made.

Einstein's thinking, while integrating Western and Eastern thinking, more heavily exhibits early Eastern thinking as evinced by his statement about past, present, and future are not different.

Einstein agreed that everything that happens, happens in the present or does not happen. Psychotherapist Fritz Perls, founder of gestalt psychotherapy said: "Nothingness in the Western sense can be contrasted with the Eastern idea of no-thingness. Things don't exist separately; every event is a process; the thing is merely a transitory form of an internal process. To call a person empty-headed is an insult for us. With an oriental, it may be a great compliment; the head is not clogged up, it is open." Einstein knew everything was process as  $E=mc^2$  is a process. Western science often forgets that an event is impermanent.

Einstein thought one's intuition was a true gift. Einstein implied that it was better not to structure than to structure wrongly. Einstein would tend to agree with Perls who said: "As long as you don't structure it, as long as you work with your intuition, your eyes and ears, then something is bound to happen." Both Einstein and Perls highly cherish noticing what is happening as is happening. That is the heart of Zen. That is a skill which can be learned and conditions can be provided whereby the learning can be accelerated. It can't be directly taught in the sense of being told. It is at the heart of education when Einstein defined education as that which helps someone think something that can't be learned from textbooks. Perls idea of "to teach" is: "To teach is to show that something is possible." Einstein would tend to agree. As Oliver Wendell Holmes said: "A moment's insight is sometimes worth a life's experience." Aha! and insight are similar.

And many men wound in and out,

And dodged and turned and bent about,  
And uttered words of righteous wrath  
Because 'twas such a crooked path;  
But still they follow -- do not laugh --  
The migrations of that calf.

                  The forest path became a lane  
That bent and turned and turned again;  
This crooked lane became a road  
Where many a poor horse with his load  
Toiled on beneath the burning sun,  
And traveled some three miles in one.

Regarding space, time, and awareness, Perls said: “The Trinity of the Father, Son, and Holy Spirit is space, time, and awareness. Einstein made space-time a unit. The unit needs awareness for its social use. While Einstein would not go as far as Perls in describing the intellect, Einstein did say that imagination is more important than knowledge. The choice words used by Perls is: “The intellect is the whore of intelligence.” Einstein loved humor which is an indication of a type of happiness. About this Perls said “You cannot achieve happiness. Happiness happens and is a transitory stage.”

A transformation is not unlike a rebirth. Perls said: “To suffer one’s own death and to be reborn is not easy.” What Perls does not mention is that it may be easier - - more convenient,

to allow some dis-ease in order to arrive at a greater ease. Pearls idea is that dis-ease often precedes being at ease. Gladwell's structured disadvantage may facilitate one to temporarily feel ill at ease so that greater long-range ease may arise. Teachers providing functionally discontinuous events frequently generate greater continuity.

Einstein held the Eastern view of moderation in all things. Einstein was in no way a perfect and he would agree with Perls that: "Perfection is a slow death." Rather, Einstein thought one ought to continually be working for the good of everyone. He would also agree with Robert Brault who said: "No day lost in which you took your turn, took only your share, and sought advantage over no one." Einstein thought character was most important for a scientist as did Brault.

Gestalt psychologists, including Perls, Kopp, and Jourard, hold that there are only three zones of awareness. One ---what we sense from our five senses. Two --- what we feel inside our bodies, such as tension, pain, backache, etc., and three,--- all that we think, imagine, all ideas and conceptions----zone three is called fantasy. Gestalt thinking is closely allied to Zen practitioner's thinking. Einstein made no reference, as far as I know, to Gestalt psychology but some of his quotes indicate he is closely allied to this type of thinking. Einstein did mention that fantasy was his gift. Einstein's  $E= mc^2$  relates to only 4% of the universe. Newton's thinking lasted 300 years. With everything accelerating so rapidly,  $E= mc^2$  may not last as long.

The years passed on in swiftness fleet,

The village road became a street,

And this, before men were aware,

A city's crowded thoro-fare.  
And soon a central street was this  
In a renowned metropolis;  
And men two centuries and a half  
Each day a hundred thousand strong  
Followed this zigzag calf along;  
And o'er his crooked journey went  
The traffic of a continent.  
A hundred thousand men were led  
By one poor calf, three centuries dead,  
For just such reverence is lent.

A moral lesson this might teach  
Were I ordained and called to preach.  
For men are prone to go it blind  
Along the calf paths of the mind;  
And work away from sun to sun  
To do what other men have done.  
They follow in the beaten track,  
And in and out, and forth and back,  
And still their devious paths pursue,

To keep the paths that others do.  
They keep the path a sacred groove  
Along which all their lives they move  
And how the wise old wood-gods laugh  
Who saw the first primeval calf.

Zen may be noticed to move one away from keeping the paths that others do. (as May said: “to have the courage to not know what everyone else knows.”

As Joan Didion said: “To free us from the expectations of others, to give us back to ourselves – there lies the great, singular power of self-respect.” And to get there we might notice Peter F. Drucker said: “Management is doing things right but leadership is doing the right things.” Allowing things to happen rather than making things happen (at least at certain times - - stem learning one) is a kind of “doing the right thing.”

Liberation from the self is something that may be interpreted in many ways. Zen is offered as a way of liberating the self from the self as Einstein said shows the true value of a person. A book by a Zen master Ayya Khema is titled: “*Being No One, Going Nowhere* implies no separate one. We are more connected than separate. An example of separation is national boundaries. National boundaries can at times prevent peace and harmony and unity among all peoples. Einstein promoted world government. This Zen view (you may see, not necessarily world government ) is somewhat unique in that there is not much to say except that Zen is not a view but is closer to the ground for any open view. Saying nonsense at times cannot be avoided, but even some nonsense can make sense.

Classroom management is what teachers to be often learn first and last in their teacher education courses. Teachers and school administrators often learn more elaborate versions of the same in their graduate classes. Excessive attention to classroom management fits with the obedience to authority frame.

At the heart of Zen is compassion although little mention is made of that here. Einstein did not use the word compassion, but many of his ideas actions show he was very compassionate and kind. It is wisdom and compassion which prompted Einstein to put the good of everyone ahead of his own personal good. There is a strong connection between Einstein's social thought and Zen. To be enlightened and wise is to be kind. Remember Ruben's statement: "Kindness is more important than wisdom and the recognition of this is the beginning of wisdom." This idea may have prompted Einstein to state that character was more important for a scientist than knowledge.

Zen Buddhist practitioners often believe human desires cause suffering; something like a prison. Zen practitioners frequently have gratitude for existence. As was said, Zen Buddhism has no dogma and acknowledges no God. Einstein demonstrates his close relationship with Zen Buddhism when he said (in his *Ideas and Opinions*):

"... I shall call it a cosmic religious feeling...The individual feels the futility of human desires and aims and the sublimity and marvelous order which reveal themselves both in nature and in the world of thought. Individual existence impresses him as a sort of prison and he wants to experience the universe as a significant whole...The religious geniuses of all ages have been distinguished by this kind of religious feeling, which knows no dogma and no God conceived in man's image; so there can be no church whose central teachings are based on it. Hence it is precisely among the heretics of every age that we find men who were filled with the highest kind

of religious feeling and were in many cases regarded by their contemporaries as atheists, sometimes also as saints.”

As one hears Kaplan’s ideas about Zen, keep in mind what Erwin Schrodinger said:, who helped provide the equations for quantum physics, said: “The plurality that we perceive is only in appearance; it is not real.” (Schrodinger is said to be the main provider of the equations for quantum physics.) Schrodinger’s ideas are connected to Sir Arthur Eddington’s Thought: “It is a primitive form of thought that things either exist or do not exist.” Einstein’s idea that modern science, when measured against reality, is primitive and childlike makes more sense in the light of the statements of these other great physicists. To be less primitive and childlike; being more tentative and uncertain is helpful. What is said about Zen is tentative and uncertain even though of variety of Zen practitioners may agree.

These physicists’ thoughts imply an incompleteness to understanding even when contexts are greatly expanded. Kurt Godel’s incompleteness theorem applies beyond mathematics. Searching your searching while you are searching, while going contrary to the canons of scientific investigation, is no more than noticing your noticing while you are noticing. One’s present experience is included since noticing can only occur in the present.

Since physics has no “now” the process of searching “now” is out of the field of physics. Einstein’s exceptionally broad thinking, included all conceivable and some semi-conceivable events. Intuition is semi-conceivable and Einstein thought intuition and fantasy were of primary importance.

Einstein would also pay more attention to what a physicist does rather than what the physicist says. Einstein, it is projected, would pay attention to Kaplan's thought. Noticing your noticing while you are noticing is infrequently considered. Highly tentative knowing of anything is often not practiced (potentially equalling "not knowing"). In order to be an accepted physicist, one must limit the context of reality so far that physics becomes, according to Einstein, primitive and childlike. Kaplan's thought expands contexts so far that it is not only beyond primitive and childlike; it is almost unknowable and can't be said.

In the light of these ideas, Einstein's thought, to paraphrase Immanuel Kant, may be thought of as a prolegomena to any future physics. This may expand contexts of physics so physics merges more with metaphysics. The Vienna circle sought to avoid this. The Vienna Circle's excessive desire for certainty influenced B.F. Skinner's excesses which stifle Einsteinian imagination.



## Chapter 11

### ZEN AND AN

#### EINSTEINIAN MIND OPENER

“The finest emotion of which we are capable is the mystic emotion. Herein lies the germ of all art and all true science. Anyone to whom this feeling is alien, who is no longer capable of wonderment and lives in a state of fear is a dead man. To know that what is impenetrable for us really exists and manifests itself as the highest wisdom and the most radiant beauty, whose gross forms alone are intelligible to our poor faculties – this knowledge, this feeling ... that is the core of the true religious sentiment. In this sense, and in this sense alone, I rank myself among profoundly religious men.” Einstein

While Einstein was a pantheist of the Baruch Spinoza type, Einstein’s view of “religious” is wisdom (roughly described in the Baltes and Staudinger Berlin Wisdom Paradigm). It is projected that learning Zen helps one become wiser in an Einsteinian sense. The Einsteinian sense of wisdom is found when he said: “The true value of a human being can be found in the degree to which he has attained liberation from the self.”

This goes beyond what is stated about the Berlin Wisdom Paradigm. Einstein's notion of attaining liberation from the self is what Zen is about. So elusive is Zen, and wisdom that Theodore Ruben's idea could be profitably mentioned again: "Kindness is more important than wisdom, and the recognition of this is the beginning of wisdom." Ruben's words are an example of what an "educated person" would say, thinking something that cannot be learned from textbooks (learning what can't be said). Einstein's continued expression of the community being more important than the individual is an example of Einstein's kindness, selflessness, and Zen likeness.

There is a strong temptation in following Zen to imitate what Kaplan said. Kaplan said an imitator of his statements about Zen believe: "It's not too hard to get the hang of it; we might be able to do it ourselves." And Kaplan cannot resist asking: "What is the 'it' that we can so easily learn to do?" Kaplan "was well aware of this temptation just to imitate and address oneself to the task of making one realize that the outcome of imitating would be only a substitute life." Parroting Kaplan's wisdom may prevent one from practicing one's own.

One must be kind rather than simply do an occasional kind act when someone is watching so that credit will be given for the act. Psychotherapist, Sheldon Kopp, author of several books including *Guru*, said: "I only get to keep that which I am prepared to give up. In Western terms, virtue is its own reward. There is no hope of redemption in doing good in order to be saved. Only by doing good for its own sake, without seeking reward, can we attain salvation." Kopp's first item on his eschatological laundry list is: "This is it."

Einstein may not agree with Hugh Prather (*Notes To Myself*) as Prather demonstrates openness when he expresses truth about himself: "My questions are statements. My statements are requests, and my trivia is an invitation to be friends."

Like every other set of statements about Zen, Kaplan says Zen: “imposes a discipline which is meant to enhance our capacity for answering living without bothering ourselves with the artificialities by which we complicate it.” Doing a kind act because someone is watching you to give you credit is not kindness but rather an artificiality by which one complicates one’s life.

Zen is difficult to write about since the philosophy is not so much considered “about wisdom” but is closer to the practice wisdom itself. As Kaplan says: “It would be better if that could be understood without words but for now at least, words seem to be the vehicle through which we bring about understanding in ourselves and others.” Zen “can help us see the limitation of words, and at times, the inappropriateness of using words to allow wisdom to arise.” That too is an example of something that cannot be learned from textbooks.

A possible method to allow wisdom to arise may be called functional discontinuity. It is an artificiality that may temporarily complicate living so that living may be less complicated (a sort of Gladwellian structured disadvantage). This term, functional discontinuity, refers to the process of making what is ordered or continuous, somewhat disordered or discontinuous, so that a broader order or larger continuity may be noticed.

Functional discontinuity, in Zen, assists in marking a student’s qualification for progressing to another stage on the road to wisdom, even though there are no stages. Anything that puzzles or perplexes, if focused on, may be considered functional discontinuity which, of course, is temporary, as is everything. When one allows oneself to be puzzled, one can use functional discontinuity to understand better and more. Through functional discontinuity and reducing preconceptions and habits, one may eventually come to notice one notices what is. Noticing in “Zen” is noticing what is. When one notices “what is” ones notices one is

connected to everyone and everything. Gladwell's structured disadvantage is similar to my use of functional discontinuity which may be used as a tool for sparking a awareness.

The sage, Osho uses functional discontinuity or structured disadvantaging when he said:

“It is easy to live according to principles, rules and regulations. Then you need not worry about being more alert and aware; you can follow the principles. Then you are just like a railway train running on the tracks. Those tracks are your principles. You are not afraid because you cannot miss the path...Life is like a river. There is no pre-charted way; there are no maps to be given to you which are to be followed. Just be alive and alert, and then, wherever life leads, you go with full confidence in it. Trust in the life force. Allow it to lead you towards the sea. Just be alert, that is all. While life leads you towards the sea, just be alert so that you don't miss anything. If you are alert, this life will be bliss. The very movement of the river is bliss in itself. Passing through the valleys, through the rocks, falling down from the hills, moving into the unknown is itself bliss. The river is not simply going to meet the sea, it is 'growing' to be the sea, and this is possible only through rich experience, alert experiences, moving, trusting. This is the human search. Of course, it is dangerous. If rivers could be run through predetermined paths, there would be less danger, fewer errors. But the whole beauty of aliveness would be lost.”

Osho is implying the journey and the destination are one as a good traveler, according to Lao Tsu, is not intent on arriving.

The human search can turn structured disadvantage, that which is functionally discontinuous, into an advantage and a greater continuity and as one notices and accepts more of what is.

## AWARENESS

We learn by doing and we learn to learn by learning. Unlearning is a part of learning. (Learning what you thought was true is untrue.) The notion of alertness is embodied in Zen. Zen, in one sense, is what creates philosophies. Rather than a meta-philosophy, Zen may be viewed as a prologue to philosophy, all disciplines, and everything else. As awareness precedes thought, openness to what one may possibly be aware of precedes particular awarenesses. If what is said about Zen sounds very different, it may be because Zen tends to provide infrequently considered conditions for openness to awareness. Looking in a relaxed manner with little or nothing in mind may be the most open looking. Allowing events to happen facilitates open seeing what is. What does one see in seeds and may education be a seeding process? Thomas Moore said: "Education is not the piling on of learning, information, data, facts, skills, or abilities - that's training or instruction - but is rather making visible what is hidden as a seed."

In looking at Zen, Kaplan said: “It is we ourselves who must consciously do the ‘not looking.’ The last and greatest obstacle is to free ourselves from a dependency on a source of what we still imagine to be instruction: (from the teacher-- prophet, priest, philosopher, psychoanalyst or Master.)” Zen implies that which we are looking for is that which is looking. This applies to Einstein’s notion of “liberation from the self.”

It is helpful not seek too much for the seeking may interfere with the finding. We must not be attached to seeking, finding, wisdom, or Zen. As we become more aware, we become attached to less and less. Some practitioners have no attachments even to a self, so they liberate themselves from the self as Einstein said was one’s true value.

Like every other set of statements about Zen, Kaplan says Zen : “imposes a discipline which is meant to enhance our capacity for answering living life without bothering ourselves with the artificialities by which we complicate it.” Zen can help us see the limitation of words, and at times, the inappropriateness of using words to allow wisdom to arise. Words may only be expedients. Sometimes words are used with some people and not with others. Words are expedients to help people be aware. An unknown Zen master said any word used is an expedient to help one notice “what is.”

In 2007, Gilbert and Bruckner-Harvard psychologists wrote: .... “we spend more of our time away from the present than in it. People typically overestimate how often they are in the moment because they rarely take notice when they take leave. It is only when the environment demands our attention--a dog barks, a child cries, a telephone rings--that our mental time machines switch themselves off and deposit us with a bump in the here and now. We stay just long enough to take a message and then we slip off again to the land of Elsewhen, our dark networks awash in light.”

Einstein's paying attention to what is mysterious is similar to functional discontinuity. Functional discontinuity is similar to opening a gap in one's knowledge structure. The gap is similar to "not knowing." The "not knowing" opens one to know one doesn't know even after that particular gap in one's knowledge structure is closed. The "not knowing," for some, is rather continual, and often cherished even though one is not attached to "not knowing" or anything else.

This wisdom arising from awareness and open inquiry, by no means depends on making more order or larger continuities. Wisdom is not a matter of completing any fixed set of requirements since Zen has no requirements, no dogmas, and no fixed truths. Zen embodies that which creates requirements, dogmas, and truths, and as one grows in wisdom, one notices that dogmas, requirements, principles and truths are very impermanent. Not knowing principles, explanations, and truths is an aspect of Zen and Zen facilitates "not knowing." The "not knowing" often occurs in those who are liberated from their separate self.

When only 4% of the universe is matter and energy as we know it, it appears we know less than we previously thought. Zen helps us see that by being alert to what is happening, it is okay not to know, and it is better not to know than to know wrongly. Simply being alert to what is happening as it is happening, according to Zen, is itself "no gain" for when one is alert, one may realize there was nothing to gain for the individual and the community (the whole) of which the individual is a part. Alertness is for more alertness as education is for more education. Training is not frequently for more training.

Paradoxically, in Zen there is no knowledge, no attainment, and no realization, because there is nothing to attain. In a sense, some Zen practitioners may imply that some philosophies hold people back from wisdom. Philosophy, the study of being, knowing, and building

knowledge, can be an impediment to wisdom when the striving or searching for wisdom is excessive. Each searcher must realize for oneself what may be excessive searching. Any searching for some practitioners may be excessive since some realize there's nothing to search for.

The use of excessive rationality and attempts to explain everything (including M Theory) can be seen as hindrances. Regarding Zen, it is not trivial when one knows one doesn't know. Remember May's dictum: "We need to consider the possibility that the world—or, since the concept of world is too narrow, things or being or what there is—outruns any categories we might seek to use to capture it.... This is not to say that our particular categories are lacking something that other, better categories would give us. Our imagination must go further than that." Can one imagine that "not knowing" is a way of knowing?

Functional discontinuity presents one with a dilemma or perplexity from which one cannot easily escape. Stages of its use may, at times, call attention to excessive intellectualization. Other stages - - even though there are no separate stages - - may reveal intellectualization is an impediment to growth of patience, compassion, and wisdom as well as an impediment to noticing what is.

Users of an educator's zero may use functional discontinuity to greatly reduce or eliminate excessive intellectualizing. Possibly, any intellectualizing may be excessive. The Zen student's near ultimate problem is the struggling with the problem as Kaplan says: "Until he realizes as fully and vividly as may be, that his thinking will get him nowhere with it, and then the problem vanishes. It is not solved but dissolved; he simply takes the dilemma by the horns and throws it behind him. And then another may confront him and still another."

The goal of Zen (which paradoxically has no goals) is as Kaplan says: "...to arrive at a condition in which such dilemmas no longer arise before him, in which life is no longer a problem to be solved but is just to be lived." Frequently, other philosophies tend to analyze language or generate knowledge. Zen does neither, but it may help one be more peaceful and harmonious. Being peaceful and harmonious was important for Einstein and his liberation from the self which helped generate more peace and harmony.

A learner must struggle with the discontinuity he experiences until as Kaplan says: "he is driven to such an extremacy that suddenly he breaks his way through. No magical efficacy attaches in theory. It is not magic to reduce magic or theory." The practice of Zen, Kaplan said: "is not an end itself but is instrumental" to becoming kind, patient, peaceful, and wise. One could also say that being kind and wise are manifestations of Zen. Kaplan says: "There is nothing esoteric about the process. And now, what has been achieved when one is wise? It is only in this century in which, as Ludwig Wittgenstein remarked, the world of the happy is quite another than the world of the unhappy. Wisdom brings about, a Copernican transformation: we no longer experience ourselves as the fixed center about which all revolves. 'It all depends on the adjustment of the hinge,' as someone said, 'whether the door opens in or out.'"

Wisdom, from the Kaplan point of view, "is only that small adjustment; it is not the experience of the transcendental object but a transcendence of the perpetual bifurcation of experience into subject and object. We must not think of heaven in which we are rocked in the bosom of Abraham; it is on this earth that we stand face to face with the living God. The antithesis of the earthly and the divine, the sacred and the profane, and time and eternity -- -- all these belong to adjust the apparatus of pernicious intellectualization that Zen wants to

dispense with once and for all.” Zen makes no difference between sacred and profane or between the holy and the ordinary. Neither did Einstein.

Kaplan hopes he has said enough about Zen for one to anticipate that Zen does not make much of a fuss about illumination/wisdom: “There’s not much to it, after all... Achieving it is at bottom not an achievement -- -- the marksman rejoices when he examines the target, but it is neither the examination nor the shot that gives cause for rejoicing: his arrow stood in the bull’s-eye from the very beginning. Man is not in bondage, struggling for freedom; he is already free. If there is a bondage here, it is the Spinozistic human bondage which consists only in ignorance.”

Kaplan holds the wisdom of Zen ...”consists in the realization that there is nothing to aspire to, that we already have everything for which we are struggling. How can I get away from the triple world, a student asks. Other philosophies hold to a ‘triple world, a world of phenomena, the world of sense, a brute fact, of triviality and meaninglessness.” Zen replies, “Where are you now? Why try to get away when you would have already arrived? What is all this talk of returning home when not for one moment have you been away?”

We often want to avoid all what the thought, feeling or experience we are “now” having thinking that something will happen to make things better. We move to the next “now” and we often think, as Eckhart Tolle said, “This isn’t any better.” It isn’t any better because we’re not paying attention to the thought, feeling, or experience we are “now” having. Paying attention to what is happening is facilitated by openness. Jeffrey Miller, evolutionary psychologist—Univ. Of New Mexico, mentions openness first on his last of Big Five Personality Traits. The other four are: conscientiousness, agreeableness, stability and extraversion.

## MORE ON ZEN

As was alluded to, in “getting Zen” it is helpful not to look too hard for it. Remember the young fish asking the queen fish, “What and where is the sea?” The more relaxed one is, the more one is able to notice what is. As Yuan Wu said: “As soon as you chase and try to grab Zen, you have already stumbled past it.” This idea will be repeated.

Zen has much to do with behavior patterns whereas many philosophies do not. Because Zen influences behavior patterns, Kaplan believes Zen “is one of the most vital and significant philosophies known.” As far as I know, Einstein did not use the word Zen. What he promoted, however, was much in agreement with Zen.

Paradoxically, Zen doesn't do much with reasons or philosophy and as far as Zen goes, there are no right words because what Zen is, isn't sayable. Instruction in Zen or mind-opening occurs, Kaplan says: ...“not in any discursive exposition of doctrine but in recounting -- or even a matter of re-creating -- of interpersonal situations between teacher and student in which words may or may not play a part. It may be a situation in which the student or teacher asks a question and receives a reply, or one in which the teacher reports an encounter between another teacher and student, perhaps adding his own comment. Such encounters are question and answer encounters; we might say a dialogue, anecdote, or vignette.” Such encounters may be something like the teacher providing functional discontinuity, the purpose

of which is to notice a larger continuity (larger chunk of what is). Such very large continuities cannot be expressed since it would sound like nonsense as in saying emptiness is fullness.

What is said of Zen can only be noticed when one notices how one behaves rather than what one says. What Zen is telling us according to Kaplan is: ...“we cannot escape the confrontation of our own natural self. We cannot help trying to find meaning in life.... We cannot hide from ourselves. So instead of telling us what the problem is, (Zen) ...insists that the whole trouble is just our failure to realize that there is no problem, and of course, this means that there is no solution either.” Is this not similar to Einstein’s saying all one needs to be happy is a violin, a table, a chair, and a bowl of fruit?

In short, Kaplan says the Zen: “...solution to the great problem of life, is not solving it all: the not solving is really the solving. The wise man does not pursue wisdom but lives his life and therein precisely does his wisdom lie. The wisdom that Faust comes to in the end, Zen starts with it.”

Kaplan concludes by saying Zen: ...“is not rejecting one metaphysics, set of thought, or theology in favor of another. It is a whole metaphysico–theological enterprise that is being repudiated. So far as concerns the actual living of our lives there is little to choose among the various constructions. They are all metaphors, as it were, and while a change of metaphor may satisfy the critics, it will never lift us from literature into life. We become so accustomed to particular conventions of civilization that we forgot altogether that we are dealing with symbols and mistake convention for nature itself.”

Merton says: “Enlightenment is not a matter of trifling with the facticity of ordinary life and spiriting it all away. As the Buddhists say, Nirvana is found in the midst of the world around

us, and truth is not somewhere else. To be here and now where we are in our “suchness” is to be in nirvana, but unfortunately as long as we have thirst (desire or craving) we falsify our own situation and cannot realize it as nirvana. As long as we are inauthentic, as long as we block and obscure the presence of what truly is, we are in delusion and we are in pain. Were we capable of a moment of perfect authenticity, of complete openness, we would see at once that nirvana and samsara (ordinary living) are the same. This, I submit, implies not a flight from the world, denigration of the world, repudiation of the world, but a real understanding of the value that is in the world. However, such an understanding is impossible as long as one desires what the world craves and accepts, the Avidya of the world as the source of ultimate answers.” (Avidya is an un-emancipated state of mind—ignorance.)

Einstein said: There are two ways to look of life: “...one is to see that nothing is a miracle, the other is to see that everything is.” As Kaplan earlier said, “miracles surround us and we often miss them because we are waiting to hear a trumpet to announce them.” Noticing the miracles all around us every day, and all the time in the present, is a practice of Zen. Zen is a way of liberating a separate self. To mention Einstein’s central Zen idea again: " The true value of a human being can be found in the degree to which he has attained liberation from the self."

Kaplan says: “I’m living. No wordy discussion is necessary, nor any explanation. I do not know why, and there is no need of explaining, but when the sun rises, the whole world dances with joy and everybody’s heart is filled with bliss...”

I’m led to believe Einstein did not move to the point of “not knowing” of Zen masters yet he cherished the mysterious which may be considered an element of “not knowing.”

About this Stephen Batchelor commented:

“The questioning that emerges from unknowing differs from conventional inquiry in that it has no interest in finding an answer. Its questioning starts at the point where descriptions and explanations end. It has already let go of the constraints and limitations of conceptual categories. It recognizes that mysteries are not solved as though they were problems and then forgotten. The deeper we penetrate in mystery, the more mysterious it becomes.

This perplexed questioning is the central path itself. In refusing to be drawn into the answers of “yes” and “no,” “it is this,” and “it is not that,” it lets go of the extremes of affirmation and negation, something and nothing. Like life itself, it just keeps going, free from the need to hold any fixed positions - - including those of Buddhism.”

## DISCONTINUITIES AND CONTINUITIES:

### Stages Of (Nonstage) Zen

The following ten-stage story may show an order to a growing awareness. They are a condensation of Philip Kapleau’s stages as seen in his *Three Pillars Of Zen*. This order may

be similar for non-stage Zen. The story is often viewed with pictures of a person and an ox at various stages of awareness. As awareness precedes thought. Openness to what one may possibly be aware of precedes any particular awareness.

The first stage of order shows a person searching which is equated to searching for wisdom (powerful noticing, compassion, and aware judging) attempting to see into one's nature even though there is no need to search because wisdom was never lost, yet the searcher at this first stage is not aware of wisdom never being lost.

The second stage relates to the searcher finding hints like "ox" footprints through various teachings and other experience. With this evidence, the searcher is still deluded so that the searcher still makes differences, some of which the searcher thinks are true.

In the third stage the searcher sees what is making the "ox footprints" (clues) but the searcher believes that there must be more than what he sees and senses. He or she is not yet focused at this third stage. The searcher needs focusing so discipline is needed, and there is a struggle to discipline the self (similar to Einstein's "liberation from the self"). Perhaps some self imposed structured disadvantage, or self imposed functional discontinuity may be used to liberate the self—similar to disciplining the self). All of the stages may be said to be the stages in the liberation of the self. What is paradoxical is that we were never un-liberated and noticing that is tantamount to a liberation from the self. Kapleau said:

Really, you don't have any path; you have just iron rails on which your train is running. You will reach the destination, you need not be afraid. You will be asleep and the train will reach it. It is running on dead paths. But, practice says that life is not like

that, it is more like a river. It is not running on iron rails. The path has not even been charted before.

The fourth stage is about the taming of the self. It is here noted that when a thought arises, other thoughts frequently follow. We find that old habits are difficult to break and we are not yet disciplined enough at this stage to tame ourselves.

The fifth stage includes the searcher noticing the struggle is greatly reduced (less of a need for structured disadvantage or functional discontinuity). Gains and losses are taken into account and are transcended as Robert Kennedy, S. J. transcended Christianity and Zen. Seeing one's searching is seeing into one's self, yet at this stage one is still somewhat deluded when one thinks thoughts are unreal. Delusion arises from one's own mind. As Zen Master Dogen said: "The way of the Buddha is to know yourself. To know yourself is to forget yourself. To forget yourself is to be awakened by all things." Forgetting the self is Einstein's liberating the self from the self.

The sixth stage implies that thoughts are transcended and the searcher arrives home and experiences the delusional thinking. Enough disciplining is done to avoid temptation and many habitual behaviors.

The seventh stage of practicing Zen shows that both the searching, and the searcher are transcended and merge in no thing. The way to get there that can be said is not the way. The arrival at this point is similar to making one's self so open that one can hold very large amounts of turmoil and not be overly affected by the turmoil surrounding one. One is serene, patient, and compassionate. The mind is clear and the person no longer seeks wisdom. The searcher and everything are one. One's being so open is similar to Einstein's liberation from

the self. Notice that the undefined openness may be considered an educator's zero since when one allows oneself to be highly open and integrated, one is liberated from the self.

The eighth stage is the searching and the searcher are forgotten. The searcher does not have ideas of wisdom, nor feelings of which he or she is proud.

The ninth stage shows that from the beginning of time, any separation was a delusion so that we need not be reformed because we were never deformed. Ideas holding us to striving are not present and the former searcher sees impermanence surrounding everything. Noticing the impermanence of the self is road to liberation from the self.

The final stage shows a picture of a person whose beauty and greatness are invisible because the searcher (who is no longer searching) is not separate, and realizes she or he never was separate from everyone and everything. The story says that everyone she or he sees becomes at-ease. The last stage implies that when one is enlightened, one is kind and compassionate to everyone and everything. That is wisdom. (One notices "Thou art that.") When one learns to be kind and compassionate, what else is there to learn? The pure awareness at this tenth stage is awareness of "what is," and as Kaplan earlier said, ... "miracles surround us and we often miss them because we are waiting to hear a trumpet to announce them." This stage needs no sound of a trumpet and implies no need for trumpeting.

Robert Kennedy S.J. was mentioned at the fifth stage although I notice him in the 10<sup>th</sup> stage. Kennedy said: "Zen does not speak of original sin, but of a original ignorance. It strives to enlighten that darkness of mind from which sinful actions come." Elsewhere he said: "Zen reminds us that Christian contemplation is not the looking at Christ, or a following of Christ, but the transformation into Christ." Transformation into Christ would be similar to being highly compassionate and kind even in a secular sense without a necessary belief in Christ as

God. Being compassionate, at ease and kind is what one is in this 10<sup>th</sup> stage. Via transcending most of what one previously thought, one can see that a good Christian may be a good Buddhist. Christianity and Buddhism are one as is everyone and everything.

Kennedy's transcending Christianity and Zen is much like living the way Francis of Assisi spoke: "Where there is hatred, let me bring a love. Where there is injury, pardon. Where there is doubt, faith. Where there is despair, hope. Where there is darkness, light. Where there is sadness, joy. May I not so much seek to be consoled, as to console. To be understood, as to understand. To be loved, as to love. For it is in giving that we receive, it is in pardoning that we are pardoned, and it is in dying that we are born." (in a sense, Francis of Assisi was a Buddhist as (in a sense) was Einstein.

Zen masters believe that we are born and die each second or moment. Francis was very Zen like when he said: "Preach the gospel always. Use words if necessary." The preaching Francis spoke of is putting into action what he said above: "Where there is hatred let me bring love, etc." This transcending is beyond words. I interpret Francis to mean the secular and the divine are one much as Meister Eckhart spoke: "The eye with which I see God is the same eye with which God sees me." Another way of saying that is the secular divine. Some Buddhists say there is nothing sacred beyond the mundane and the mundane is sacred Einstein and Zen practitioners hold to no separate divinity. Zen "not knowing" applies.

## INSIGHT GENERATION

Jonah Lehrer reports on a 1949 fire-fighter (Wag Dodge) running up the hill with fire quickly following him. Knowing he could not beat the fire up the hill, he set a fire in front of him to burn the brush. He momentarily waited behind that fire and when the main fire rushed up the hill, the fire had no material to burn when it reached him. He survived. Thirteen others died in that Montana forest fire.

Lehrer states that as a case of insight where the firefighter's prefrontal cortex allowed a stretch to the right hemisphere to involve some long associations which kept him from being burned by starting a fire. (Starting a fire to avoid being burned is similar to seeing that one's separate self was never separate.) The invention of zero around 750 C.E. allowed mathematicians to compute in ways that were previously impossible. Educators today, in order to keep up with the exceedingly rapid development of artificial intelligence and robotics, could use an educator's equivalent to a mathematician's zero (also called an Einsteinian mind opener). This educator's zero could do for learning, in school and out, what the invention of zero did for mathematicians. Lehrer refers to a brain researcher named Miller who states that an insight is a restructuring of information - - the insight is seeing the same old thing in a completely new way. "Once the restructuring occurs, you never go back" says Miller. That may be similar to Einstein's thinking something that can't be learned from textbooks.

Jung -Beeman became interested in insight research when he was doing research on the brain's right hemisphere. He said the talents of the right hemisphere had been overlooked. Jung-Beeman suspected that the right hemisphere deals with connotation, adding that it gets left out of a dictionary's definition such as the emotional charge in a sentence or a metaphor. Jung-Beeman says: "Language is so complex that the brain processes it in two different ways

at the same time. It needs to see the forest and the trees.” Jung-Beeman said the right hemisphere is what helps you see the forest and he said: “Studying the brain with only left hemisphere of the brain prevented surprises from the right hemisphere. Aha! moments need the left and right hemispheres to arise.” He mentions Poincare’s insight into non Euclidean geometry while he was getting on a bus. Poincare’s aha! arose after relaxed incubation, a phase of imaginative thinking. Newtonian-Cartesian thinking is mainly left brained.

As Doc Childre and Bruce Crye said: “It is no longer enough to be smart -- all the technological tools in the world add meaning and value only if they enhance our core values, the deepest part of our heart. Acquiring knowledge is no guarantee of practical, useful application. Wisdom implies a mature integration of appropriate knowledge, a seasoned ability to filter the inessential from the essential.”

The following section deals with measuring. Tim Folger wrote that a physicist Seth Lloyd said: “A few years ago, I went to the National Institute of Standards and Technology in Boulder,” (NIST is the government lab housing the atomic clock that standardizes time for the nation). I said something like ‘your clocks measure time very accurately’. They told me, ‘our clocks do not measure time.’ I thought, why that’s very humble of these guys. But they said: ‘Time is defined to be by what our clocks measure.’ Which is true. They define the time standards for the globe: time is defined by the number of clicks of their clocks. “Lloyd says;” “Clocks do not really measure time at all.” Time is frequently measured by space and space is frequently measured by a time. Keep in mind that the ultimate measuring sticks, time and space, when reading the following.

## MEASURING WITH fMRI and EEG.

“Focus is all about blocking stuff out: the cortex does this for the same reason we close our eyes when we’re trying to think,” said Jung-Beeman.

Google has ping pong tables in their headquarters to promote creativity – mental rambling, incubation, relaxation, to change brain waves to alpha, at times.

Jung-Beeman says of a Zen meditator who is attached to an fMRI and an EEG: “It is paradoxical because of his ability to focus on not being focused so that he could pay attention to those remote associations in the right hemisphere.” He reports researcher Kounos said: “He had the cognitive control to let go. He became an insight machine.” Einsteinian schooling promotes this type of insight generation.

Earl Miller, a neuroscientist at MIT, developed a machine, a methodological advance known as multiple electrode recording which allowed Miller to ask a completely new kind of scientific question. He said: “For the first time it was possible to see how cells in different brain areas interacted.” Miller was interested in interactions of the prefrontal cortex. “You name the brain area, and the prefrontal cortex is almost certainly linked to it,” he said.

The “integrative” theory of the prefrontal cortex suggests why one can instantly recognize the insight, even when it seems surprising; the brain has been pursuing the answer; one just didn’t know it. Your consciousness is very limited in capacity and that’s why you’re prefrontal cortex makes all these plans without telling you about it. When that obscure circuit in the right hemisphere finally generates a necessary association, the prefrontal cortex is able

to identify it instantly and the insight erupts into awareness. We subtly notice the music has been playing all along.”

And yet even this detailed explanation doesn't fully demystify insight. It remains unclear how simple cells recognize what the conscious mind cannot, as Jung-Beeman says: "...how they are able to filter through the chaos of bad ideas to produce the epiphany. This mental process will always be a little unknowable, which is why it's so interesting to study. At a certain point you have to admit that your brain knows much more than you do. An insight is a fleeting glimpse of the brain's huge store of unknown knowledge. The cortex is sharing one of its secrets.” HL Mencken said: “We are here and it is now. Further than that, all human knowledge is moonshine.”

The unknowable of which Jung-Beeman speaks has a Zen aspect to it. Can one do something to know it better? Some say “no” implying it is chance which enlightens.

Some Zen masters say meditation increases one's chances. Meditation may simply be looking and seeing what is there unhampered by habit or preconceptualizations.

Regarding meditation, as we are like a wave in a vast ocean, Sluyter says the wave is never at rest. Sluyter Continues:

“It is in constant, turbulent motion. Like waves, all things I encounter are limited, isolated, and in motion, and so am I. From my point A to point B is just 5'10" and 153 pounds, and not only my body but my personality, history, philosophy, social status, net worth -- -- everything I might identify with me is dwarfed by the much larger totality of Not Me. Within the great expanse of time it is a frighteningly short span from the moment of my birth to the moment when I will crash against the shore we call death.

And both I and all the other finite, wavelike beings undergo the turbulence of constant activity and change, often creating new problems and limitations as we slosh up against each other.”

“Most of us respond to this situation by looking for ways to swell up our ‘Me’ wave as big as possible. If I can insulate myself with just a few more buckets of money, knowledge, affection, muscles, prestige, sharper clothes, cooler attitudes, more intense sensations, maybe I will finally overcome limitation and become the King of all Waves. Or maybe I can overcome the ravage of time and death by freezing all waves in place -- -- after I get them to stop sloshing and line up my way. Then everything will stay the way I want it and I will live forever.”

“But history books and the tragedies of Shakespeare are full of people trying these strategies, and they haven't worked yet. Perhaps, then, I might be ready to try a new strategy. I can begin by noticing that I have considered only the surface of life, the world above the wave line. If I look beneath the water. I find that something underlies my little wave -- -- the vast ocean, from which I arise and into which I eventually subside.”

Eckhart Tolle asked: “When I say I'm going to tell myself something, who is the "I" and who is the "self" I'm telling? That's the fundamental question, isn't it?”

## Chapter 12

### WHAT CAN BE SAID (ABOUT WHAT CAN'T BE SAID)

Dear Albert,

I am writing the following as a part of a brief speech I will soon give. I would appreciate your reaction to it.

(Speech) I am writing a “Not News Blog” to help me to un-solemnly state a few interesting word connections partly about not connecting words. This is offered to evoke a response to lead oneself and others to Zen practice. If Zen held anything, it would hold that Zen is the study of the self, and the best way to study the self is to forget the self. Leading oneself is educating oneself. When you lead yourself, you help yourself and others to educate and develop themselves to notice that everyone and everything are more together than separate.

Nothing clear and accurate can be said about Zen but philosopher Abraham Kaplan reminds us: “It is we who come to Zen with the expectation of being taught; but what we have to learn is precisely to get rid of such expectations.... We must recognize at the outset that Zen is not a religion in the usual Western sense. It has no sacred books or symbols, there's no special dogmas, and performs no characteristic ceremonies or rituals.”

If we do not see everyday wonders, Zen would say, it is because we look through a cloud of words. Kaplan says: “Zen is direct and immediate, the words are mediators; we relate to life as though it were a government we have not officially recognized and with whom we communicate, therefore, only through the good offices of a third party. We want to ‘understand’ life, but that only means that we want to put it into words -- -- we are groping for the intermediary.”

While Zen does not speak of a heaven or hell, Zen masters often relate a story about many people in a large room with hundreds of delicious foods and desserts placed all around them. Each person had one yard long chopsticks tied to their right hand with their left hand tied behind their back. Each was trying to feed himself but the long chopsticks prevented anyone from placing food in their mouth. The food was falling all over the floor and each person was starving.

In a similar nearby room with the same delicious food and mouth-watering pastry, the people were feeding each other with their chopsticks. No one was hungry and they were all happily helping each other. These scenes occur now. The first scene may be thought of as hell, and the second, heaven. Compassionate, kind sharing is at the heart of Zen and maybe heaven. You Albert, are a master of compassionate sharing as evinced by your statements about community concerns before individual concerns. You are kind and you know kindness is more important than wisdom. You know that the realization about kindness is the beginning of wisdom. I’ll write more about this later.

Cordially,

H.A.

## QUESTIONS ABOUT ZEN

Paradoxically, Zen is comprehensive; nothing is excluded. (If you notice why Zen can't be said, what you are referring to is also probably not yet sayable since openness to what is goes way beyond. A Zen Master might say it is beyond "beyond." To make more sense out of some nonsense about Zen, some Zen ideas will be repeated. Regarding Zen, what need is there for a teacher (as teller) since there is nothing to tell. Paradoxically, Zen masters mainly say only what is needed to help people awaken. When one is patient and kind, one may be said to be awakened. Buddha means a person who is awake. Zen is at the heart of Buddhism but Vipassina and Tibetan Buddhism are similar.

Zen is about one's present experience. Kevin McKenna mentioned Eckhart Tolle's comment: "...All the mind can do is before and after, but does not know how to be present in the now." An extension of Tolle's quote can lead one to think that since the present is ongoing and continuous, undefined, and unknown until we stop it, we frequently stop present experience to be more certain and secure. Would Feynman agree? When we stop present experience, we frequently create fixed notions that are known in an orderly way. In order to be more certain, our minds capture and contain the fixed "befores" and the projected fixed "afters." Certainty of this sort is an awareness inhibitor. Awareness is awakening. The "allowing events to happen rather than making them happen," stem learning one, helps

increase awareness. Einstein never directly spoke about simply allowing events to happen but his happiness/“violin, bowl of fruit, table and chair” comment supports it.

Some people always follow regulations, rules, and principles because it is easier than being open to not knowing and uncertainty. When following rules one does not need to be as aware. Some allow aware, structured disadvantage - - functional discontinuity - - because disadvantage and focus now may bring more long-range advantage.

Two or a trillion expressible ideas would not be big enough to capture the process of Zen. Zen is not the ideas though ideas are not necessarily excluded. Zen has no dogmas, or sacred books. Some people come to a Zen temple with the expectation of being taught, and what is taught is to get rid of those expectations.

What follows is by no means a final statement regarding how to become more aware. The following strategies deal more with the J. Richard Suchman approach to open-ended inquiry. This approach is a preliminary stage to noticing what is. This approach is excellent because it not only develops free open thinking, but also requires open, free thinking in order to do it. We learn by doing. We learn to openly inquire by openly inquiring. We learn to judge well by judging well. One doesn't judge well when they are fearful of making mistakes. Allowing and temporarily accepting mistakes is often helpful for noticing what is.

Awareness precedes open inquiry. The exercises in J. O. Stevens book, Awareness, are broader and more powerful than these Suchman cognitive strategies for theory building. The strategies and tactics below can be very helpful at some stages that are mentioned in the stages of gaining insight. The strategies, by themselves, do not seem enough to carry a learner to the stage of noticing that simply noticing is more important and productive to

peace, wisdom, th th Any unification would need to include “the process of unifying” which may lead to incompleteness (infinite regress) since the process is continuous and ongoing.

and harmony than cognitive open inquiry. Open inquiry, in some cases, may include a struggle and desire to have more than what one has. As G.K. Chesterton said: “There are two ways to get enough: one is to continue to accumulate more and more. The other is to desire less.”

The stages are important in the beginning of developing open inquiry, and I suggest they be used as a tool along with exercises similar to those in J. O. Stevens book: *Awareness*. Besides these two mentioned means, there are many others, and as one may see, deciding for oneself is usually best after a relatively early age. His mother, Barry Stevens wrote an excellent book, *Don't Push your River: It Flows By Itself* (about allowing events to happen).

The exercises from the book, *Awareness*, require smaller un-coerced groups. While the tactics and strategies that follow for open inquiry require that no grades and no forced participation, the same is true for the awareness exercises. The awareness exercises may require separate permission from parents, depending upon the student's age. Leading some awareness exercises may also require a special background and study with an experienced mentor.

Comparing a super small variable with a super big variable may help one better notice a process of educating. One micro variable is an infinitesimal, an amount too small to measure. The biggest macro variable does not yet have a name yet let us assume it is an amount too large to measure. This large macro level variable may be seen as a unity which was never separated, rather than as a tool to help unite disparate parts of what has now been conceived. Some earlier separate conceiving may have been a problem. Inquiry helps us make larger

conceptions but the process of becoming aware may help us become less attached to conceptions. Excessive conceptual knowing can interfere with noticing. Some earlier conceptions may only have been temporarily useful in helping one notice that one never was a separate self (separated from the whole of which everyone and everything are a part). Knowing that the earth is the center of the universe prevented many from earlier seeing that it was not, as Copernicus proved.

These comparisons are used as a guide to help us know the value of not knowing/tentativeness. Once again, Kaplan's version of Zen is a philosopher's version. Some Zen masters say nothing yet saying an Einsteinian mind opener is an amount too large to measure may be similar to saying nothing. All measures, however, arise within mind opening. Openness to experience/letting go of attachments (liberating oneself from a separate self) is Zen. Openness to experience and letting go of attachments creates freedom. Nothing is more unbound than freedom.

The openness and letting go of attachments helps one become self-directing. One wonders whether one needs to be a "self" before one can let go of a "self." The letting go of a separate self relates to the Zen awareness of emptiness as form and form as emptiness. The highest self directing behavior may be getting rid of a separate self. Getting rid of a separate self is like seeing one's emptiness which simultaneously sees the fullness of everyone and everything.

Is everyone, one? Zen Master, Shunryu Suzuki said we are not one and not two. Everyone and everything are one and two, and not one and not two. If that sounds strange and nonsensical, remember Robert Oppenheimer's answering answers no, no, no, no, to questions about whether the electron is moving, stationary, etc..

When we are one with everyone and everything, whatever one does for another, or for a thing (say a tree) one does for one's nonexistent separate self. Awareness of being one is more than cognitive in that cognitive, affective, and psychomotor domains are separated only for purposes of analysis. The results of analyses are often communicated to others, but when there are no "others," and there is no other with which to communicate, the separation of a whole into its parts, the analysis itself, may be an illusion. The whole is only seen in terms of the arrangement of the parts, and wholes cannot be seen when only parts are communicated. As some unknown scholar said, verbal communication involves coming down from a higher level. Verbal communication involves separating subjects from predicates. When all is one, the subject and predicate are also one. Saying red is red, is neither informative nor illuminating.

Western society has trained us to be informative and illuminating as though we were not informed or illuminated prior to authorities telling us. Kaplan's view of Zen concludes we are already illuminated and informed. At times, an excessive need for illumination and to be informed prevents us from being illuminated or informed. When we notice that we are already illuminated and informed, that is similar to being awake. When one is awake, one notices what is. When awake, one is frequently at ease, kind and wise.

Open inquiry can lead one at times to greater awareness, and at other times, greater awareness may be stifled when we create predicates and subjects where none are needed. When all is one what needs to be said? Predicating about subjects is intellectualizing and that may prevent us from living peacefully.

Predicating about a subject is closely allied to predicting. We often fail to notice that a prediction is done in the present, and predicting tends to focus our attention away from our

present experience to some fantasized future time when the predicted event is projected to occur.

Carry Gray states An Einsteinian view of education when she says:

“For years I have been searching for an education that is meaningful – an education that doesn’t press me into predetermined categories or ask me just to satisfy outer requirements, but one that I resonate with on the inside. My interest is in knowledge that addresses me as a whole person, and can offer insight into questions such as: Who is this “I” and How is it connected to that which is known? What is real knowing? What is the relationship between knowing and being? Between ideas and life itself?”

“This knowledge of my own existence, which I receive directly by taste, is the starting place for a new form of education. Taste is like the difference between thinking ‘apple’ and actually biting into an apple. In the moment that I bite, regardless of my past ideas and images, I know ‘apple’ directly, undeniably. This taste is something that the mind cannot produce; it exceeds my ideas. It shifts the site of knowing from a field of outer information or past experience to a receptive relationship with this moment. A connection to the body is the ground for experiencing my own existence via taste. When taste is present, the mind can receive conscious energy, and knowing and being

become unified in the form of realization. Knowing and being become direct expressions of each other.”

...”This kind of direct experience helps me to see the limits of what the mind can give me, and helps me to see what I don't know. Instead of looking to the preconceptions of the mind, I connect with the body, with the taste of ‘I am,’ and I stay receptive to not-knowing. In this state, knowing and not-knowing are simultaneous, and they support each other. I am available to receive the reality beyond my concepts. Knowledge has become integrated into experiencing my own existence in life.”

Sounds like what a Zen master might say depending upon the circumstances.

Attempts at explaining what is going on in and around us may now need reducing. Such a reduction may help us better notice what is occurring as it is occurring. Alertness always goes on in the present and alertness helps reduce rational explanation. Rational explanation may now be excessive as shown by our lack of attention to present experience. Remember the physicist Muller implied there was a flaw in physics for not having “now.” Since “now” is difficult to identify, is difficult to measure and as a result we may wonder what scientific endeavor uses “now.” But I also wonder what if it doesn't.

The reduction and excessive present use of rationality would not be irrationality, but rather, being alert to what is happening as it is happening. We alertly notice what it is happening as it is happening not through precepts and principles. As Osho said: “Non-violence is not a principle; if you are mindful, you cannot be violent. But, that is difficult. You have to

transform yourself.” The transformation would not be irrational, but rather, transrational. A transformation would allow people to alertly notice what is happening as it is happening and to use rationality as a tool when it is useful for the good of all as Einstein suggested.

Pirsig reminded us that the early Greeks made rationality that which determined the highest virtue. The determiner of the highest virtue (rationality) itself became the highest virtue for Western society. We have been afraid to be somewhat foolish (transrational) ever since René Descartes excessive left brain activity cemented Aristotle’s thinking for Westerners.

It is easy to live according to principles, rules and regulations. We can be more certain once the principles rules and regulations are accepted. Lake thinks a political conservative’s mindset is obedience to authority.) If one obeys authority, one need not worry about being more alert and aware. (Hitler’s nazis were obeying authority while killing people because they were Jews.) Awareness takes second place to obeying authority within the conservative frame. The authority creates the rules, principles (what is right). Training contributes to one’s passive acceptance of rules, principles, regulations, and being obedient to authority. Self directing education helps one decide for oneself, which paradoxically, permits one to decide what is most helpful to everyone and everything.

What results from having been primarily trained in specific clearly defined skills as opposed to being generally educated for self-direction? We know what training in a specific skill is but very few courses have had the stated goal of making students wiser. Researchers reported in the American Psychologist that when we are wise, we use knowledge for the well being of oneself and others. Baltes and Staudinger, who report on the Berlin Wisdom Paradigm in an APA Journal state: “Wisdom addresses important and difficult questions and strategies about the conduct and meaning of life.” One suggested strategy (their paradigm does not mention)

to help one become wise is: increase the tendency to allow events to happen, rather than make them happen.

At first glance, allowing events to happen, rather than making them happen, appears to be counter-productive for getting good grades in schools. The Berlin Wisdom Paradigm mentions that uncertainties and the limits of knowledge need to be studied in order to be wise. The limits of knowledge and uncertainties rarely are given attention in courses which primarily “train” as opposed to “educate.” The Berlin Wisdom Paradigm mentions, “an orchestration of knowledge and virtues” which is a synergy of character and mind is what wisdom involves.

Einstein thought “character” was more important for scientists than knowledge. The Berlin Wisdom Paradigm also mentions: “knowledge with extraordinary scope, depth, measure and balance,” is needed for wisdom. Some training is needed but “training,” as opposed to “education,” has been excessive and is often coercive. Grades continue to be more important than learning for most “students.” “Learners” are more open to learn that which helps one be aware; awareness which leads to what Einstein saw as a true value of a human being: liberating the self from the self.

A reason for courses not dealing with developing wisdom is because there is no common measured agreement regarding what is wisdom or wise behavior. Since we do not have agreed measures for balance, extraordinary scope of knowledge etc., we do not give wisdom much concern.

Without measures we cannot define. When we cannot define an event,, Western thinking holds we are stupid about it. This may be one of the mistakes Western thinking has made since Eastern thinking more easily allows one to know more than one can tell.

Schools and universities could profitably seek to cherish uncertainty and eliminate pressure and stress that arise from expectations. The expectations are for students to acquire the accepted practices and mindsets of present day society (often following authority).

Free Schools seek to eliminate undue pressure and stress that arise from placing expectations which the common mindset of the day holds. Students' personal development, and wisdom of the Berlin Wisdom Paradigm type is a major goal of Free Schools so that each student can become an independent thinker and learner. Each student and staff member has an equal voice in decisions affecting the running of a free school.

Free Schools allow students, staff, and even visitors to offer a class, event, or an activity provided attendance is non-compulsory. Most of us, being primarily trained, do not consider free schools yet there are strong elements of wisdom contained in those free school ideas.

How would it be for students if teachers and professors thought students were natural learners who could pursue in any manner they choose any interest they have, and at their own pace, as long as they don't interfere with the right of others to do the same? Free schools do that. Schools and universities cannot change overnight but would student wisdom increase if more schools and universities more intensely moved in the direction of what free schools do?

When students are free they can maximize their learning. Our previous teachers and professors placed a strong emphasis on training. Being primarily trained, we often desire stability rather than freedom and growth. The stability gives us certainty and does not lead us to explore the limits of knowledge and uncertainties. As a result, most of us graduate from schools and universities with specialties and do not realize that the development of wisdom has been avoided.

## EINSTEIN'S TRANSCENDING

Chapter One begins with Robert Kennedy, the Zen Master and Catholic priest who had transcended Christianity and Zen in order to practice both. Einstein's thinking transcended what was earlier known in order to create  $E=mc^2$ .  $E=mc^2$  is a type of transcending occurring during the acceleration of mass to become energy even though energy does not transcend mass in the sense of becoming "higher" or more refined or better than mass. To think something that can't be learned from textbooks there is a probability of a need for transcending old ways of thinking to conform more closely to the tentatively known non-linearity and uncertainty of what is.

Sir Arthur Eddington's idea "That things either exist or don't exist, is a primitive form of thought" implies that we may be less primitive and more informed if we transcended "existing" and "not existing." If it takes an infinite amount of energy to move something at the speed of light, at what speed would matter not be either matter or energy? Is there a gray area between matter and energy and, if so, what is it?

These comparisons are used as a guide to help us know the value of not knowing (tentativeness). The value of not knowing for teachers and school administrators, as well as politicians and citizens, is that we will be less coercive in our nation's schools when we know

we don't know. Less coercion implies that students will better learn to decide for themselves. So many of us have been trained to think that there is much content our students must learn at various grade levels. When we look at our young children learning a language without a curriculum, and without a scope or a sequence, we notice that we are natural learners if societal interference is not too great. Today, schools interfere with powerful learning by cramming prescribed content into the heads of students. Giving content is fine in answer to a student's question. But the cramming schools do prohibit student questions from arising. The E. D. Hirsch curriculum is definitely not recommended. Kipp (knowledge is power program) appears to meet with more "success" than many traditional schools. Some what they do may be fine and some not so fine.

Even well-intentioned groups of educators who want to explore the process of inquiry, at times, often believe that inquiry is to be used as a tool to put prescribed information into student's minds (often "that's" as opposed to "hows"). Inquiry is open or it is not inquiry. Inquiry is not a tool used to cram information into student's minds. Open inquiry is frequently what people do when they are not forced to remember trivia and other unasked for information. Awareness facilitates open inquiry and open inquiry facilitates awareness. Awareness comes before and after inquiry. Awareness is more primitive and essential to self direction. Open awareness is an Einsteinian mind opener. That which generates and facilitates awareness is also a mind opener.

UNIVERSAL SILENCE = A SILENT UNIVERSE

Thomas Keating said... "Silence is God's first language and all else is a poor translation." Would others who so realized stop writing and talking so much? Before one gets to that point, as meta-analysis is an analysis of a variety of analyses, one's silence may be necessary for meta silence which may arise with a variable too large to say? Could such silence be too immediate to hear? (We breathe all the time yet we often don't pay attention to it because we are so surrounded by it as the young fish who went to the Queen fish to ask about the sea was so surrounded by the sea, the sea was unnoticed. So may it be for us and awareness.

Rachel Naomi Remen said: "The most basic and powerful way to connect to another person is to listen. Just listen. Perhaps the most important thing we ever give each other is our attention... A loving silence often has far more power to heal and to connect than the most well-intentioned words."

What might move us from no aha! to an enormous aha!?! Could it be wonder? Might wonder be a self provoker that would lead our discoveries from more thought to less thought to beyond intellectual conceiving? Eckhart Tolle mentioned noticing one's breath ( as when meditating) one's right brain hemisphere operates. Excessive left brain operation may inhibit noticing what is.

As in our common math system, zero might be a mid-point between positive numbers and negative numbers. When the number two is thought to be two units more than zero, might our thinking be noticeably different if we considered the number two from a different point? The following quote from an unknown mathematician demonstrates an uncommon openness.

Could open wonder and uninhibited noticing be an educator's zero; an Einsteinian mind opener?

“We ordinarily see the world as if all physical form is greater than nothing and tend not to envision the world as if it is less than an infinite whole. Yet it is possible to conceptualize the observed world in either way, as more than nothing, or less than everything.”

Our outdated educational systems close us so contexts remain unexpanded. Today, an empty set/“nothing” has no meaning outside of mathematics. How might we expand our minds to the point where it may have at least occasional meaning under certain circumstances? How would a student be different today if teachers provoked students to synthesize and evaluate ( or simply notice) by giving no answers? This provoking would not done excessively - - but provoked to the point where students would have confidence in their own view of what they notice. Buckminster Fuller said: "Dare to be naive."

As Joan Didion said: “To free us from the expectations of others, to give us back to ourselves --there lies the great, singular power of self-respect.” We can more readily achieve self-respect when our parents and teachers give us the freedom to make mistakes. With the freedom to make mistakes we can freely notice and exercise our judgment without worry about excessive shame that we have made a mistake as we move on the way to noticing what is.

If all things are involved in the process of change, might we self-provoke to the point where we notice our minds open more after a mind is moderately provoked. Moderate provoking is similar to functional discontinuity, and/or structured disadvantage. As our wondering provokes us, might we also see that what we know is only a small fraction of what can be

known, especially as we consider that our fund of knowledge, by the year 2024, may be doubling every 17 days?

Perhaps we could find a wondering, provoking, zeroing, mind-opening process, coupled with high degrees of tentativeness, as an educator's equivalent to a mathematician's zero? Once again, if we learn by doing, we learn to be open by being open.

Extending Einstein's thought to embrace the opposite of an infinitesimal, a very large macro variable which does not yet have a name, is extending almost to the limits of possible extension. Let us extend this macro variable even a step further and assume this very large unnamed variable is an amount too large to measure. This macro, very large variable, cannot be measured because it may be considered the primal unit from which various measures, differences, or separations were later made (the mental pre-big bang event). It may be seen as the unit which was never separated rather than as a tool to help unite disparate parts of what we have now separated.

Conceiving (separating or differentiating) may, at times, be a problem. Inquiry helps us make larger conceptions but the process of becoming aware may help us become less attached to conceptions since conceptions arose from a larger unity which may be too large for any definition. This very large variable may be the event from which other events arise. It may also be seen as an invariant whole from which other variants are seen as parts. Seeing parts as separate from a larger whole may be a delusion. Steven Weinberg, University of Texas Physicist, said: "All human beings, whether religious or not, are caught in a tragic situation of never fully being able to understand the world we are in."

These comparisons are used as a guide to help us know the value of not knowing and tentativeness in our expressions. Zen is too large to measure. All measures arise from the

unknown through imagination. Openness to experience/letting go of attachments is an essence of Zen. Openness to experience and letting go of attachments creates freedom. The openness and letting go of attachments helps one become self-directing patient, kind, and at ease..

Zen practice is dharma practice. As Batchelor says: “The task of dharma practice, is to sustain this perplexity within the context of calm, clear, and centered awareness. Such perplexity is neither frustrated nor merely curious about a specific detail of experience. It is an intense, focused questioning into the totality of what is unfolding of any given moment. It is the engine that drives awareness into the heart of what is unknown.” An aspect of the perplexity he speaks of relates to functional discontinuity and structured disadvantage. The Zen master does everything in a relaxed, calm manner. Paradoxically, the experienced perplexity is barely perplexing. J. Richard Suchman spoke of the perplexity as productive tension.

## Chapter 13

### THE INQUIRER ASKS

### ABOUT WAYS OF THE WAY

"Every child is an artist. The problem is how to remain an artist once we grow up." Pablo Picasso

If modern science, when measured against reality, is primitive and childlike as Einstein said, and if it is primitive to think things either exist or do not exist as Sir Arthur Eddington suggested, may it be less primitive to expand our contexts to include what was earlier considered as non-testable and unscientific? What follows are suggested as possible thought and awareness provokers to expanded possibilities which were formerly infrequently considered.

Can one be detached but attached to detaching, patient yet be impatient about becoming more patient, looking for great things to do for others while not seeing that numerous small opportunities to help others continually surround one, generous in a selfish way, saying much when there is little to say?

"The capacity for getting along with our neighbor depends to a large extent on the capacity for getting along with ourselves. The self-respecting individual will try to be as tolerant of his neighbor's shortcomings as he is of his own." --Eric Hoffer. Difficulty in

getting along with oneself is often sparked by not knowing one's self. (Zen is the study of the self). Knowing one's self is facilitated by noticing what is. Because of Einstein's imaginative openness, he was the first to notice that  $E=mc^2$ . He knew himself well. He knew and accepted that he was often confused. More us more often could use Einstein's confusion.

The romantic affairs Einstein was known to have were perhaps not unkind. His relationship with his cousin, his second wife, was such that she permitted what was later called an open marriage. She wanted him to have only one "involvement" at a time though. I do not know many circumstances surrounding his first marriage to Mileva Maric which ended in divorce. I think it is fair to say that many women were impressed with him and many wanted to be romantically involved with him. He was good looking, humorous, and well groomed in his earlier years.

#### TRAINED BUT UNEDUCATED—MANY THATS, FEW HOWS

The educator/poet, Kahlil Gibran, is worthy of restatement: "No teacher can reveal to another anything but that which already lies half asleep in the dawning of a student's knowledge." That great teacher also said:

"If he (the teacher) is indeed wise he does not bid you enter the house of wisdom, but rather leads you to the threshold of your own mind."

Do you agree with Ingrid Bengis who said: "The real questions are the ones that obtrude upon your consciousness whether you like it or not, the ones that make your mind start vibrating like a jackhammer, the ones that you 'come to terms with' only to discover that they

are still there. The real questions refuse to be placated. They barge into your life at the times when it seems most important for them to stay away. They are the questions asked most frequently, answered most inadequately, the ones that reveal their true natures slowly, reluctantly, most often against your will?"

Do you agree with Nagarjuna who said: "There is pleasure when a sore is scratched, but to be without sores is more pleasurable still. Just so, there are pleasures in worldly desires, but to be without desires is more pleasurable still? " --- *Precious Garland*

Can kindness and compassion be learned, and can that which helps them be learned also be learned and taught? Is the learning of what one helps one learn kindness and compassion so varied as to prevent public schools from providing conditions whereby learning kindness and compassion can't be facilitated? Your degree of agreement with questions below may give you a feel for whether Einstein would say you are liberated from your separate self.

Do you agree with The Dalai Lama who said: "The purpose of all the major religious traditions is not to construct big temples on the outside, but to create temples of goodness and compassion inside, in our hearts?" If education is that which makes one whole, it may be said that one is more educated when they are kind and compassionate. One could posit that knowledge has as its purpose to make one whole, kind and compassionate. Einstein was knowledgeable as well as kind and whole.

Do you agree with Ram Das: "Pain and separation occur when we regret the past or worry about the future. Here and now is ecstasy?"

Do you agree with Esther de Waal: "Wealth consists not in having great possessions but in having few wants." --Esther de Waal

Do you agree with a sage who said: "Even in the case of individuals, there is no possibility to feel happiness through anger. If in a difficult situation one becomes disturbed internally, overwhelmed by a mental discomfort, then external things will not help at all. However, if despite external difficulties or problems, internally one's attitude is of love, warmth, and kindheartedness, then problems can be faced and accepted"?

Do you agree with educational elements of the Dalai Lama who said: "I believe there is an important distinction to be made between religion and spirituality. Religion I take to be concerned with belief in the claims to salvation of one's faith tradition or another -- an aspect of which is acceptance of some form of metaphysical or philosophical reality, including perhaps an idea of heaven or hell. Connected with this are religious teachings are dogma, ritual, prayers and so on. Spirituality I take to be concerned with those qualities of the human spirit -- such as love and compassion, patience, tolerance, forgiveness, contentment, and a sense of responsibility, a sense of harmony, which bring happiness to both self and others?" Einstein and the Dalai Lama were spiritual in that sense.

Do you agree with Cheri Huber who said: "Yes, I am me, but what animates me is what animates Uncle Bob, the cat, the tree, the rock and all that is? We are packaged differently,

but we share the same essence. There are many of us and we are not the same but we are all one?" Einstein would agree.

Do you agree with the Dalai Lama who said: "Our problems, both those we experience externally such as wars, crime and violence and those we experience internally as emotional and psychological suffering will not be solved until we address this underlying neglect of our inner dimension. That is why the great movements of the last hundred years and more-- democracy, liberalism, socialism, and Communism--have all failed to deliver the universal benefits they were supposed to provide, despite many wonderful ideas. A revolution is called for, certainly, but not a political, an economic, or a technical revolution. We have had enough experience of these during the past century to know that a purely external approach will not suffice. What I propose is a spiritual revolution?" Einstein would agree without necessarily using the word "spiritual." He thought character was more important for a scientist than knowledge.

Do you agree with the Dalai Lama who said: "A good motivation is what is needed: compassion without dogmatism, without complicated philosophy; just understanding that others are human brothers and sisters and respecting their human rights and dignities. That we humans can help each other is one of our unique human capacities?" Einstein would agree.

Do you agree with a sage who said: "The fool who thinks he is a fool is for that very reason a wise man; but the fool who thinks he is a wise man is rightly called a fool?"

Do you agree with Thich Nhat Hanh who said: “The essence of nonviolence is love. Out of love and the willingness to act selflessly, strategies, tactics, and techniques for a nonviolent struggle arise naturally. Nonviolence is not a dogma; it is a process.

## THE WISDOM OF SELF-DIRECTION

As some of the above fuzzy thoughts are difficult to clearly define so is process. “Now” is a process as is “mind,” “freedom,” “self direction,” and “wholeness.” As a result of primarily considering parts without paying more attention to context (and the context of the context) tentative knowing is reduced. When we think we know with certainty, we frequently know less. Non-tentative knowing produces more temporary certainty. Certainty prevents openness to other possibilities and as a result, in the long run, we know and understand less. Paradoxically, knowing we know less may be a condition for knowing more.

Paying close attention to one's present experience is important for self direction. Being open to noticing fearful experiences helps one pay close attention to one's present experience. When one is highly certain, (like a know-it-all--highly un-tentative), one is committing a kind of growth suicide. More importantly, one's lack of awareness about one's certainty contributes to the habits of lack of compassion, lack of kindness, and being anxious. Good things that remain undone can become as habitual as other habits that one has formed by repetitive doing. There is a repetitive not doing the things that still need to be done. The repetitive not doing contributes to a difficulty in doing what needs doing.

Habitual avoidance of self-direction, not being one's own authority by looking to the authority of others to know what to do and how to do it, increases the difficulty in becoming

self-directing. Those who are certain that they can't do "it" (almost any it) can't do it. Schools and universities often unconsciously promote the opposite of self direction.

And as was earlier mentioned, Lao Tsu says: The way that can be said is not the way." As has been mentioned, Gandhi's: "There is no way to peace. Peace is the way," is a clue to support providing conditions for self-direction. Gandhi's quote leads one to the notions: -- there is no way to education; education is the way. There is no way to openness. Openness is the way. There is no way to wisdom. Wisdom is the way. There is no way to self-direction. Self-direction is the way. We learn by doing. We learn to be self-directing by being self-directing. We increase our ability to learn by learning. These matters are so basic that they almost do not need mentioning. They are mentioned here because schools and universities seem to have forgotten them.

## IMMEASURABLES

Teachers, professors and administrators are often more interested in students demonstrating knowledge of what is easily measured rather than events that are noticed (known) mainly through non quantified qualities (such as "now", "open mindedness"). Philosopher Richard Rorty does not ask for quantifiable data when moving toward cultural change, but rather he said: "A talent for speaking differently, rather than arguing well, is the chief instrument of cultural change."

If anyone asks, "What is quality in thought and statement?" most of us, including experts, would have difficulty in answering. We all know what "experience" is as we know what

“time” is, but both experience and time are very difficult to define unless we ask about a particular experience, or a particular time. The same is true for “quality.”

A self-directing, educated person does not need someone else to tell him or her what is good and what is not good, whereas students who are primarily trained, do need someone else.

Let us first consider intention. Begley and other brain researchers are now showing that learning changes the brain in measurable ways. If we continue to wait for certainty before we change what is done in classrooms, we will be short-changing student’s potential.

Because of a lack of clear measures, teachers’ and professors’ intentions to develop self-directing, open, creative students are often disregarded. This disregard results in stultification of minds. Awareness of one’s present experience, as one is experiencing, is at the heart of what one does for developing open, self-directing citizens.

Experts often know what cannot be done within their field. They know partly because of preconceptions they hold. Some preconceptions are easily measured, fixed ideas (some of which have a tendency to close minds). A search for an educator’s mind opener helps us choose to focus on which hypotheses could profitably be tested since all hypotheses cannot be tested.

Nirvana is certainly not measurable. Can it be experienced as one experiences the beauty of Jolie, Pitt, or a Beethoven symphony? Merton says:

Following the teaching and experience of Buddha, man seeks to apprehend the real nature of his existence and to patiently rediscover his real roots in the true ground of all being. When this is grounded in authentic truth and love, the roots of desire wither, brokenness is at an end, and truth is found in the

wholeness and simplicity of nirvana: perfect awareness in perfect compassion. Nivana is the wisdom of perfect love grounded in itself and shining through everything, meeting with no opposition. The heart of the brokenness is then seen for what it was: an illusion, but a persistent and invincible delusion of the isolated ego-self, setting itself up in opposition to love, demanding that its own desire be accepted as the law of the universe, and hence the sufferings from the fact that by its desire it is fractured in itself and cut off from the loving wisdom in which you should be grounded.

This mind-opening helps us formulate assumptions or approximations as a first step in creating the paradox of an “open mindset” which often determines behavior. A mind-opener relates to open, imaginative intuition, self-direction, improved guessing, and ignorance reduction (all difficult to clearly measure). The best mindset may be no mindset. An open mind is not set. That which removes barriers from mind opening is itself a mind opener? Some preconceptions are necessary yet too often they contribute to stultification of awareness and promote mind closing.

Students who have attended free schools where Carl Rogers and A.S. Neil’s freedom to learn ideas are used show that students can learn much without being told what to know or how to know “it.” Some explications by professors may not be needed, and some teacher-telling may contribute to mental ossification and un-emancipated minding when students don’t decide for themselves. Self direction, to be developed, requires control by the self director (the student).

Many teachers and professors don't agree with this. Some would have nothing to "profess" since conditions for generation of mind opening and open inquiry do not require much telling. In up-to-date school and university requirements, the job of the teacher or professor is to provide conditions for students to decide for themselves what will secure or endanger their freedom. As has been said on several occasions: "One who is one's own educator is on the road to wisdom." Your best teachers may have helped you figure "it" out for yourself. As far as I can see, there is too little noticing and too much figuring, yet we are often trained to get "the right answer" as though "the answer" is true for all times and places for all people. We have been trained to adore stagnant fixities. As Goethe said: "Thinking is more interesting than knowing, but less interesting than looking."

The old adage: "Don't just do something, sit there", is supported by Robert S. Hartman from "The Measurement of Value." Hartman said: "Our definition of value was that a thing was good if it fulfills its definition. The definition of a human being is in himself. Hence, a human being is good when he fulfills his own definition of himself. What does this mean? It means that he is morally good if he is as he is."

"All the words of ethics mean this very same thing, this identification of myself with myself, being sincere, being honest, being genuine, being true to myself, having self-respect -- these words mean that I am as I am, that I am myself. This seems to be a very simple thing and yet it's the most difficult to achieve."

Some "right answers" may at times be trivial and /inconsequential as well as erode one's sense of wonder. How did we come to allow the manipulation by the governmental-- industrial complex? What is it we did not know, or what is it we were not aware for this manipulation to be so extensive?

Thomas Friedman's 9/14/08, "New York Times" column partly supports Lakoff's thought. Friedman's column is about: "Making America Stupid." He is talking about John McCain promoted "drill baby drill, when Friedman thinks our country should be chanting, "invent baby invent." Einstein would agree with Friedman as President Obama does.

Schooling has trained citizens, including many teachers and professors, to avoid noticing that their teaching often helps maintain the power of the governmental—industrial complex. The status quo embraces the notion that schooling primarily helps prepare students for jobs. Training for jobs is fine except when schooling neglects the development of awareness, judgment, self-direction, and open inquiry. The avoidance of open inquiry in classrooms is a failure to develop a student's ability to decide for oneself what will secure or endanger one's freedom. Schools now need better balance between job training and development of awareness, open inquiry, and self-direction.

Notice how many of your previous and present teachers or professors consulted you and your classmates before they began to tell you what they think you should know. Few teachers and professors consult students. As they begin "teaching," teachers and professors often tell. Students listen. That is how teachers and professors are often trained to train. (Most were trained by modeling –doing what their teachers and professors did to them. They were told what they should and should not know). This pattern is so common in schools and universities that it is barely noticed. It may not be noticed by many Catholics since the modeling of their leaders has shown an avoidance of consultation as per the following 7/29/09 Newsweek quote of Bishop Murphy which demonstrates an old mindset. The old mindset may not only be true of Catholic church leaders, but also some of their followers due to the modeling of their leaders. Newsweek printed: "American bishops in the 1970's struggled to produce a paper

that would address the concerns of women. After nine years of effort, they gave up. Why? According to Bishop P. Francis Murphy, bishops see themselves as "teachers, not learners: truth cannot emerge through consultation." Dave Doane, a psychotherapist, in response to Bishop Murphy's quote said: "That says it all. If they're not learning, they're dead."

The followers of this old mindset are primarily less open, conservative thinkers who agree that once you have the truth, you have the truth period. Furthermore, that truth is fixed and true for everyone at all times. This is what Einstein and Zen practitioners disagree with.

The lack of consultation is okay for purposes of training. For purposes of educating (developing awareness, open inquiry, judgment, imagination, and self-direction) teachers' and professors' lack of consultation before they "profess" or "teach" is evidence of their outdated training. Training often implies development of narrow skills. The general skill of deciding for oneself, and integrating narrower skills into a general, aware, judgment, promoting self direction is often neglected. Schools and universities often work against what evolutionary psychologists and other neuroscientists have recently found.

My 17 years of Catholic Schooling allowed me to decide for myself so that I now see Christ's teachings and Buddha's teachings are one along with self-directing, mindful, secular education. Once one begins to notice that obedience to authority has been, but no longer is of paramount importance, one can begin to intensify one's learning to decide for oneself by deciding for oneself. I learned that much of the world is gray rather than black and white. One's paying attention to one's present experience, gives one a better chance of deciding for one's self what is best for everyone and everything. This education leads one toward becoming one's own authority. As has been said, he who is his own educator is on the road to kindness and wisdom.

We learn by doing. Our schools and universities do not often practice helping students become free. Rather, schooling often trains students to think what they are told to think, and to do what they are told to do; just what the governmental-industrial complex wants. This murders student's minds and a longer school day or year would do more murdering unless noticeable change occurs.

How long will schooling continue to primarily be concerned with excessive obedience to authority? My experience leads me to believe that we must now experiment with becoming our own authorities. Our founding fathers experimented in a civilly disobedient manner when citizens became aware that something could be done about taxation without representation. Throwing tea into the harbor was illegal but needed doing. With Henry David Thoreau, we can thoughtfully involve ourselves in civil disobedience, if and when it helps make us free.

Students can learn to cast off shackles. One large shackle is lack of awareness of excessive obedience to authority. Unlearning some of the trivia one is forced to learn helps one become more aware of their obedience to authority. As you are more aware you can more easily see that teachers and professors excessively train. The excessive training prevents students from using their judgment and imagination (unless they are choosing to be trained in an aware manner).

One's experience can lead one to believe part of our training involves saying we want to develop students' ability to openly inquire, and to develop love of learning. Unfortunately those powerful goals are often only given lip service in school and university classrooms. I have heard of no university course syllabus that has the primary goal of developing a student's ability to openly inquire, become self-directing, and develop love of learning. If students noticeably increased their open inquiry, independent judgment, and love of learning,

they would develop the ability to think something that can't be learned from textbooks. With an increase in open inquiry and judgment the subtle training would be reduced and aware, imaginative learning and living would follow.

## TRIVIAL LEARNING

Whatever one chooses to learn in an aware manner is not trivial. The old school mindset does not agree. Powerful learning requires some unlearning of what is trivial. Clarity is a facet of student, professor, and school/university accountability. Fuzziness is often taught to hide mistakes. Because aspects of powerful learning, such as “aware self-direction, open inquiry, loving learning” are not clearly defined, they are difficult to measure and are often considered fuzzy. Teachers and professors do not often have powerful goals such as developing passion for open inquiry because of the measurement difficulty. As a result, teachers and professors are often grossly failing to educate partly because education itself is not clearly defined, and partly because of our excessive need for certainty. Being a complex process, education in the form of developing self direction, like quality and Zen, is too complex to be contained in words. Education, like quality and Zen, do the defining and are left undefined. They are often best left fuzzy for optimum development of self direction.

Many teachers and professors equate education with training in clearly defined skills. Some teachers and professors think we can notice open inquiry, self-directedness, and independence of thought. We notice those unclear goals as we notice the beauty of Angelina Jolie and Brad Pitt, or the brilliance of a Beethoven symphony, without defining beauty or brilliance. Our

need for certainty tends to avoid personal judgment as noticing the beauty Jolie, Pitt, and Beethoven's symphonies. Professor's training often does not allow for judgment without data. Clarity and data go together. We account with clarity and easily measured data. I believe only a small percentage do not notice Angelina and Brad as attractive yet we do not need definitions of attractiveness to notice their attractiveness and beauty.

The 1983 A Nation At Risk report warned that "the educational foundations of our society are presently being eroded by a rising tide of mediocrity that threatens our very future as a Nation and a people." As mentioned earlier, the report stated that if an unfriendly foreign Power placed on our country the schools we now have, we would consider it an act of war. A key element of the report was the teacher element. Many experts agree, the teacher element is one of the most important and also one of the most elusive goals that needs to be at the core of improving America's schools. Open, aware teachers are needed but schools and universities do not focus on developing awareness and openness.

Former Governor Roy Romer of Colorado said that little has changed in the teaching profession since 1983. He is chairman of Strong American Schools, which just released a report examining those 1983 recommendations... The report said: "...and grading them on the degree to which any action has been taken. Attracting better teachers and improving their salary received an 'F.' Making grades indicators of actual learning and significantly expanding the amount of time students spend in school both earned an 'F,' too."

It is projected that powerful learning arises from open awareness. Awareness is present awareness. What one remembers is a present remembrance and what one says about a possible future happening is a present anticipation. Brains remember, but not as well as machines. Developed whole brains notice complexities such as open inquiry, self-

directedness, faces, and independence of thought, better than machines. Brain research may soon lead us to wonder about what can't brains do rather than wonder what can brains do.

While most researchers agree there is no narrative that explains all narratives, this writing helps a look at what can't brains do to promote self-direction. Too often schools and universities teach us our limits rather than providing conditions for us to notice that we have barely begun to notice how we may powerfully develop and change our brains.

Some notions may need to be unlearned in order to guide or reveal what hypotheses could now profitably be tested in order to better promote conditions for ahas! to arise. Einstein, and other Nobel Laureates used unproved and perhaps unprovable ideas as guides to discoveries which might later be proved. It is assumed that the process of brain plasticity may be used as a guide to explore the processes of open inquiry and unlearning even though the process of open inquiry may never be clearly defined. Awareness and open inquiry, based on quality, are the processes which do the defining. Awareness, by many definitions, is even more basic than open inquiry. Awareness and open inquiry are so basic that, like breathing, we give them little attention.

If you noticed conclusions were drawn without supporting data, consider that data arises from one's consciousness noticing sensation, perception, and, construction. These three words may describe the process of ordering one's experience so it may be expressed and understood by others. As was said: "Words don't mean by themselves, we mean by their use." Construction continually need is reconstructing as Dewey reminded us.

## THE PLAGUE of PRESUMPTUOUS EDUCATORS

Presumptuous because they train rather than educate. When training, the content or skill is reasonably well defined and trainers take students in relatively small steps to a desired, clear, trainer's goal. What is presumptuous is that training, while necessary for education, is insufficient to becoming educated. Most schools and universities primarily train.

Education according to many great minds relates to what Thomas Jefferson said: that which enables one decide for oneself what will secure or endanger one's freedom. (Noticeable yet difficult to measure.) Schooling has become excessively controlled so that accounting for what schools do is easy and clear. The content and skill can often be easily measured when compared to the primary purposes of education: love of learning, openness, self awareness, and self-direction.

When students frequently send and receive electronic texts during class, the trainer (teacher/professor) notices a lack of trainer control. If students were free to learn skills and content without being graded unless they chose to be evaluated, they would explore that which is remarkable, interesting, and important for them. This self-directing learning generates a love of learning, openness, and more self-directedness. Self-direction is self organization. Many agree self organization is the essence of life.

The old school mindset presumes that the learning of content and skill development is paramount. My assessment, as a 40-year experienced educator is that schools constrain to the point where teachers and professors have presumed that students must be controlled in order for them to learn what the teachers and professors think are important content and skills. The forced learning of content and skills frequently prevents the development of love of learning, openness, and self direction.

Another presumption is that most schools and universities semi-consciously hold a major purpose of schooling is to learn “obedience to authority.” If the development of empathy and cooperation, rather than obedience to authority and competitiveness were primary goals, students would primarily learn the hallmarks of self-direction: the exploration of what is exciting and worthy of exploration. Exploration is rare when remembering what others think is a major goal.

The goals of students and the goals of trainers are often different in American schooling. Schooling in Finland, from which Japanese educators are now learning, focuses more on using content and skill as a way to achieve love of learning, creativity, openness, and self direction. My experience is that some American schools have inquisitiveness and love of learning as a stated goal, but lip service is given to these goals when content and specific skills are delivered in classrooms.

Content and skills are rapidly changing which soon outdates the skills and content taught. One recent candidate for the presidency of the American Psychological Association said that by 2024, our fund of knowledge will be doubling every 17 days. Ray Kurzweil, an MIT award winner, states that we will have 1000 times more technological change in this century than the last. The first hundred years of technological change will occur in the first fourteen years of this century. The next hundred years of technological change will occur in the following seven years.

The majority of schools and universities are still training in a manner that promotes the obedience to authority mindset which often prevents the development of what helps one decide for oneself what will secure or endanger one’s freedom.

Patrick Welsh, USA TODAY Forum, 6/23/09, promotes training and control of students. He refers to Maggie Jackson, author of *Distracted: The Erosion Of Attention*. Welch and Jackson

seem to neglect the notion that student self-direction often requires what a student attends to rather than forced attention to what is too frequently boring for students.

To show the pervasiveness of the old obedience to authority mindset, I mention Harold Levy's June 7, 2009, NY Times Op-Ed which includes several notions tending to control for training while subverting education. Levy, a former New York City schools Chancellor, and Arthur Levine, President Emeritus of Columbia Teachers College, in his comments about Levy's ideas, make no distinction between training and education.

It is surprising that Levy and Levine, because of their high positions as educators, seem to be promoting the old school mindset which places accumulation of knowledge as a primary goal of instruction, instead of open inquiry, growing awareness, self-directedness, and love of learning. With inquisitiveness and love of learning, the accumulation of knowledge arises naturally. It is unfortunate that many teachers and professors continue to hold this old destructive mindset. Albert Einstein said that education is that which helps one think something that can't be learned from textbooks. Einstein would disagree with the holders of the old mindset.

USA Today's Laura Vanderkam reported on research from the American Psychological Association journal that the conservative mindset promotes control of students. I expect that names mentioned above do not fall in to the politically conservative camp, but because of their successful training, they continue to desire training as they have been trained. I do not doubt that's they are self-directing people even though they appear to be excessively trained in the old school mindset.

The equating of training and education is a plague because the "obedience to authority" frame has become so ingrained in teachers and professors, that rarely is it noticed that we do not make serious attempts to develop love of learning, openness and self direction. Because schools have

been operating this way for so many years, teachers, and professors desire to control partly because they have been highly controlled and constrained often in an unnoticed manner. Students, through their texting in class may be uttering a “no” as in Mohandas Gandhi’s wise statement: “A 'no' uttered from deepest conviction is better and greater than a 'yes' merely uttered to please, or what is worse, to avoid trouble.” Schools and universities maintain the status quo to avoid trouble when they could profitably move toward giving themselves more permission to greatly increase classroom experimentation while allowing themselves to make more mistakes.

Nicholas Kristoff, NY Times, 7/1/09 said: “Evidence is accumulating that the human brain systematically misjudges certain kinds of risks. In effect, evolution has programmed us to be alert for snakes and enemies with clubs, but we aren’t well prepared to respond to dangers that require forethought.” My Webster’s New Collegiate dictionary further supports Kristoff. Intellect is defined as: “the power of knowing as distinguished from the power to feel and will.” It also defines intellection as “reasoning.” The intellect and will are not as separate as we at one time thought yet no immediate danger moves us to notice more brain unified operation.

Late brain research shows that the brain operates as a whole even though various brains sites and hemispheres may specialize in certain functions. David Denton’s “Feeling/Notion Epistemological Paradigm” demonstrates strong connections between knowing, feeling, and willing. When one is holistic and operates as a whole, the brain integrates knowing with feeling and willing. Most of us know older dictionary definitions, and as a result, we make judgments based on fixed ideas which are now slowly changing but largely go unnoticed.

Kristoff refers to Daniel Gilbert, professor of psychology at Harvard University who said: “What’s important is the threats that were dominant in our evolutionary history.” Threats moving one’s amygdala to rapidly prevent danger move us rapidly. In contrast, he says, “...the kinds of dangers that are most serious today — such as climate change — sneak in under the brain’s radar.”

Kristoff adds: “This short-circuitry in our brains explains many of our policy priorities. We Americans spend nearly \$700 billion a year on the military and less than \$3 billion on the F.D.A., even though food-poisoning kills more Americans than foreign armies and terrorists.” The slow damage to self direction, minding, feeling, and willing, done by coercive schooling,

is not noticed for the same reasons. Einsteinian/Zen ways of being help us notice and change the negativity resulting from such debilitating not noticing.

Conclusions based on what was self evident to the writer may not always need more data if what is self evident is shared. We don't need data to know that a set in mathematics cannot, as conveniently, be explained in terms of a simpler idea. One of the conclusions mentioned was that schools and universities excessively train while providing less time and effort to develop open awareness and self direction.

Excessive training causes the excessive distribution by teachers and professors of unasked-for information. When training is primarily for more schooling or more training, it is excessive. Education, however, is for more education as self direction is for more self direction. When involved in an educational experience, the journey and the destination are one. Most schools and universities primarily train. We all would be enhanced by more education and less training. Part of education allows one to do more self training.

Education often happens when students freely chose what to learn, when to learn it, and to a certain extent, how to learn it. What more is there to deciding for oneself what will secure or endanger one's freedom? Education generates more life. Life arises from self-organization. Self-direction is self organization. Learning self-direction is learning to self organize. Self-direction and self-organizing involve learning to learn which is best learned by learning what is remarkable, interesting, and important for the learner (non-trivial events). Highly interesting or remarkable "trivial" facts are not trivial. What's trivial to one, however, may not be trivial to another. Noticing one's present experience and having facility to express it is often nontrivial. Schools and universities rarely promote noticing and expression of one's present experience.

Self-direction as a synonym for education is important. If I said: “One is educated when one is patient and kind,” I would have greater difficulty in being believed, and I would be thought of as foolish by many. Is it too sweeping to say that when one is educated, if one is kind. Henry James said: “There are three things important in life: The first is kindness. The second is kindness. The third is kindness.” Since kindness can’t be forced or it’s something other than kindness, freely chosen kindness, and self-direction go together.

Kindness and self direction may not be self evident. What is self evident? Do I need data to be kind right now? I say no. One’s kind demeanor precedes kind acts. The kindness of my mother, family and friends whom I greatly respect, leads me to believe that kindness is more important than wisdom. Is it too sweeping to say that when one is kind one is wise? I have the memories of seeing my mother and other very wise family members and friends being kind, giving, and finding fulfillment in being kind. Data, as we usually use the term, is something that is more easily given in numbers and statistics than in the values from which numbers and statistics arise. Einstein said in a 1918 speech:

In the temple of science are many mansions, and various indeed are they that dwell therein and the motives that have led them thither. Many take to science out of a joyful sense of superior intellectual power; science is their own special sport to which they look for vivid experience and the satisfaction of ambition; many others are to be found in the temple who have offered the products of their brains on this altar for purely utilitarian purposes. Were an angel of the Lord to come and drive all the people belonging to these two categories out of the temple,

the assemblage would be seriously depleted, but there would still be some men, of both present and past times, left inside.

I interpret Einstein as saying those for whom science is their own special sport tend to be more imaginative and educated than trained. They have what Einstein called “character.” Imagination and education have as their purpose, more imagination and education, whereas training is often for something other than itself. Einstein’s gedankenexperiment (thought experiment) arises from education rather than training.

Readers often want data to support writers’ conclusions. I don’t know what to say other than when one is primarily trained, one relies on others to tell them what to do and how to do it regarding specific skills. Giving is a goal in itself and giving is so generalized that it is difficult to define, as is kindness and wisdom. As Theodore Ruben said: “Kindness is more important than wisdom.” My conclusion is: When I’m kind I am wise. Do I need data to support that? Our values precede sensation, perception, and construction while our sensations, perceptions, and constructions, partly determine what we value.

“No one has yet fully realized the wealth of sympathy, kindness and generosity hidden in the soul of a child. The effort of every true education should be to unlock that treasure.” -- Emma Goldman.

Zen “values” are included in the *Dharmapada* whose first words are: “We are what we think. All that we are arises with our thoughts. With our thoughts we make the world.” The universe can be separated into static and dynamic, classic and romantic, or a billion other ways. We may find more peace, harmony and well-being if we didn’t separate what is one. You may wish to entertain the possibility of not separating as being more natural. We have separated the universe into matter and energy. Recently we found that only 4% of our

universe is matter and energy as we know it. The other 96% is dark matter and dark energy about which we know almost nothing. Do we know only 4% of the universe, and if so, would you agree we know very little?

Students can legitimately complain about schooling and university training, but not because schooling is difficult and time-consuming. The complaint is schools and universities maintain the status quo by continuing to do what they have done for longer than most remember. Schools and universities maintain the status quo by excessively requiring students to remember, rather than providing open and imaginative conditions for students to be open, self directing, and imaginative. Maintaining the status quo requires students to use their lowest level of cognitive functioning; memory.

President Eisenhower warned us of the growing power of the military-industrial-complex. According to Lakoff, we no longer have a government by the people and for the people. Rather, we have a government run by corporations for corporations. Lakoff reports that corporations do not pay their fair share of taxes relative to the protection and empowerment given to them by a government.

Our school programming is so thorough that we have been taught not to notice how we are being programmed. The programming also includes that which keeps us from countering the effects of school programming. We have been taught that's the way things are and no individual has the power to do anything about it. The status quo is not frequently considered because it is so well accepted even by many professors, teachers and university administrators. Occasionally, if the value of the status quo is considered, it is often quickly dismissed because we are taught to believe individuals can do nothing about it. As Margaret Wheatley said: "Our plans are nothing compared to what the world so willingly gives us."

## PHYSICS, BEYOND PHYSICS, AND “NOW”

“The eternal life is given to those who live in the present.” Wittgenstein, “Tractatus”

“Happiness is not in another place, but in this place...not for another hour...but this hour.” Walt

Whitman, “Leaves of Grass”

To make a point, Feynman is repeated: “What is what meant by ‘right now’ is a mysterious thing which we cannot define... ‘Now’ is an idea or concept of our minds; it is not something that is really definable physically at the moment.” Events happen in the present. How will we know what is going on, unless we pay attention to what is going on as it is going on? Please notice what you are experiencing now. Do you feel free? What constraints you?

Also, Max Planck (a founder of quantum physics) said: “Let us get down to bedrock facts. The beginning of every act of knowing, and therefore the starting point of every science, must be in our own personal experience.” Personal experience only occurs in the present. (“Now.”)

If there is no way to freedom and self-direction, there seems to be no one easy way to “let go” of habitual behaviors which lead a student to follow what authorities want students to do. Experimenting with “letting go” of that which is stifling to freedom and self-direction is useful since there is no one best way to becoming free and self-directing. Acting as though you are free and self-directing is one way, even though it may be somewhat frightening.

Does smiling help one “let go?” Some have found it useful to notice that if they genuinely smile, they are more aware and self-directing than when they are not smiling. In the beginning, a non-smiler may need to force a smile, but those forced, “fake” smiles” can be genuine in the sense that the “forced smiler” is attempting to concentrate on, and generate, what some have come to call “stem ways of being.” The stem ways of being have helped many move in the direction of “letting go.”

Unaware, habitual behavior is often uncreative, mindless, and closed-minded arising from another’s direction rather than one’s own. Conscious behavior is new to each particular situation.

When one “acts” happy, one notices one more easily generates genuine feelings of happiness even when one wasn’t noticeably happy at the time of initial “acting happy.” When one puts on a “fake” smile, one can notice a genuine smile often appears more readily.

One can self evidently notice when one has gratitude for what one has and does, as one can be more smiley and less habitual in their behavior and demeanor. Some have noticed in self-directing people, that smiles and accepting gratitude for what one has and does seems like stem behavior. Furthermore, stem behavior often generates a variety of thoughts and feelings which allow one to more easily let things happen rather than making them happen (stem behavior 1).

We have all seen, felt, tasted, and smelled an apple. We have experienced but not directly sensed “now.” While “apple” is something definable at the present moment, a close look at what is printed will show a-p-p-l-e (five letters that informs our brain to restructure itself to create a picture of an apple or an “apple event”) so that the reader understands what the writer intended.

This process has, to a certain extent, allowed readers to mistake the map for the territory which the map is mapping. As physicist Muller stated: we all know what “now” is yet some physicists, he implied, have shortchanged students and the thought process by not considering it. Ahas! only occur in the present.

Dave Doane, psychotherapist, says: “I disagree with Feynman. 'Now' is not just a concept or idea. Just because we can't define it doesn't mean it's just a concept. Now is real.” Feynman and the rest of us are so immersed in the present (“now”) that, at any given moment, we fail to notice its presence and power. An apple is definable physically at the moment and “now” is more than physical. “Mind,” “beauty,” “wholeness,” “process,” “number,” and “thought,” are also not definable physically at the moment yet we refer to them frequently and know what they are.

Sally Helgeson reports Ikujiro Nonaka is the only Asian on the Wall Street Journal’s list [published in May 2008] of the 20 most influential business thinkers. He supports what has been said about Einstein and Zen: “Companies and leaders who treat knowledge management as just another branch of IT (information technology) don’t understand how human beings learn and create.... Unlike land, capital, energy, labor, and technology — the conventional ‘inputs’ into business practice — knowledge is innately self-renewing. It is produced and consumed simultaneously. Its value increases with use, rather than being depleted as with industrial goods or commodities. Above all, it is a resource created by humans acting in relationship with one another.” Helgeson says:

Nonaka notes that such processes flourish in organizations led by individuals who embody tacit and explicit knowledge in their own behavior. These ‘virtuous artisans,’ as he calls them, have

also been present in Western culture, dating back to Aristotle's exploration of the idea of phronesis in his work *Nicomachean Ethics*. Often translated as 'practical wisdom,' phronesis is the ethical yet pragmatic frame of mind held by those who can sense the essence of a situation and respond with creative and timely judgments. In *Managing Flow*, Nonaka quotes Soichiro Honda, founder of the company that bears his name, who once compared business judgment to making a good joke. 'You have to grasp the atmosphere of the occasion,' Honda said, 'which exists only for a particular moment. A joke is all in the timing, in understanding what the present evokes. To joke is to understand human emotion and be present for it.'

1. Another way of following the Einstein, Zen, Nonaka way of improving learning in schools would be to first ask: What is the problem?
2. Answer: maximizing student learning.
3. What is maximizing student learning?
4. Answer: While not neglecting training for jobs and having a secure society, learning self-direction, to be aware of one's present experience, self organizing and learning about oneself is learning to learn and maximizing learning.
5. How does one learn self direction, awareness, self organizing, and learning about oneself?
6. Answer: By placing the student in a free, responsive environment, where the student is in control and the student decides for himself or herself what how, and when the learning of what is important, remarkable, interesting for the student.

7. Question: How is that best done?
8. Answer: By providing conditions whereby students can best notice what is, i.e. Providing a free, responsive environment where the student is clearly in control. (initially students will need discrepant events—events that turn out contrary to student expectations).
9. A reason for mentioning “now” again is because of the serious problem of teachers and professors rarely consider what students are presently experiencing while they are experiencing. Students are (now)coerced to pay attention to what others want. And therefore the crucial element of student control is absent (recall the rat research on control).
10. If teachers and professors were educated, they would focus more, not only on students’ present experience, but also on their own present experience as well. Dispensing information, as most teachers and professors do, is not as optimal for a student as allowing the student to express the student’s present experience and its implications-(wonder) and students finding their own answers. Such present expressions help the student know what they are experiencing as they are experiencing. Expressing present experience may help one more fully realize what is happening as it is happening. If we pay attention to a student’s present experience, there is a greater chance of making the present moment, a moment of aha!.

Gina Kolata, NY Times, 6//28/09 said: “A major impediment in the fight against cancer is that most research grants go to projects unlikely to break much ground.” This is also true for research on education and schooling. Some Nobel Laureates agree it is also true for their disciplines. We need groundbreaking for education now.

Each of us has had ahas! and we needed some training to have them. But teachers and professors, because they don't often pay attention to their present experience, or the present experience of their students, do not realize that some ahas! are blocked by the dispensing of unasked for information, and by avoiding what is happening as it is happening. Events happen in the present. How will we know what is going on, unless we pay attention to what is going on as it is going on? Please notice what you are experiencing now.

The brain's plasticity facilitates one's knowing as well as not knowing. Brains help us quickly forget inconsequential events as well as block the entrance of inconsequential sensations and perceptions. As was wisely said: "When one's only tool is a key, every problem may appear as a lock."

The brain's plasticity may help one notice one's brain has many tools, some of which may still be fuzzy. The brain's plasticity may help us reduce some certainties as well as help us to accept gross uncertainties. The brain's plasticity can help us accept physicists' notions such as Eddington's: "It is a primitive form of thought that things either exist or do not exist."

"Now" exists in a self evident way rather than as precisely measured. Now is the only time one can be happy. About this Paul H. Dunn said: "Happiness is a journey, not a destination; happiness is to be found along the way not at the end of the road, for then the journey is over and it's too late. The time for happiness is today not tomorrow."

Being less certain may help open one's mind to previously unconsidered possibilities. Researchers will be ill-prepared to make break-through findings unless those researchers give themselves permission to make mistakes. Our schools have trained us to avoid mistakes. Brain plasticity can help one educate oneself so as to allow one to accept making mistakes. We could improve schools and universities and society by encouraging teachers and

professors to allow students to “make mistakes.” As Planck said: One’s personal experience is the starting point for knowing and acting. That is one reason it is so important to pay attention to one’s present experience.

Because one’s present experience is difficult to clearly measure, schools and universities give present experience little attention. Does the lack of accounting for attention to present experience arise from excessive trivial accounting for that which is easily measured? Is the absence of attention on present experience a noticeable lack of awareness? Only now exists.

Is it fair to say that scientists have “faith” in the falsifiability and verifiability principles? We can’t verify without the ability to falsify, but the falsifiability principle cannot itself be falsified. As Gladwell spoke of the problem of not entertaining the notion of “structured disadvantage,” it may be a problem to not consider difficult to communicate ways of knowing beyond the outgrowths of outdated positivistic thinking. As we know “now” exists even if we don’t define it (or use it in physics), can we know connections between everyone and everything exist beyond clear ways of stating the connections?

We have not yet found a firm connection between all known physical forces or between quantum mechanics and the force of gravity, yet searching for the Higgs particle may firm up that potential connection. Might it now be time to notice difficult to define connections between everyone and everything? Need we desire to explore this connection, or might we simply accept what we know (experience) as in flowing with the river of experience to where the river or rivers empty into an ocean. Are not the wave and the ocean one? Might we explore so far as to consider the possibility of the searching and finding are one as the journey and the destination may be one? Awareness, openness, inquiry, and education are living, and living is not for something else.

Connected to this is Merton's statement about an aspect of Zen: "In a word, "desire" or "craving" or "thirst" which we experience as long as we cling tenaciously to our own isolated individual ego - -constitutes itself in opposition to love and being. These two are ultimately the same: the great 'emptiness' of Sunyata which is described as emptiness only because, being completely without any limit of particularity it is also perfect fullness. When we say 'fullness' we inevitably tend to imagine a 'content' with a limit which defines and bounds it. And so Buddhism prefers to speak of 'emptiness,' not because it conceives the ultimate as mere nothingness and void, but because it is aware of the non limitation and non definition of the infinite. 'Nirvana' is therefore not an apprehended 'content of consciousness.'"

Einstein was disciplined. To be disciplined one needs to forgo certain temporary pleasures and sensations for higher and more powerful long-range well being (or well becoming). The self discipline of Einstein may be copied and considered as a form of a temporary structured disadvantage. Functional discontinuity is a form of structured disadvantage. Schools could provide conditions whereby, through greater student freedom, open responsive environments, and discrepancies, students could learn to temporarily disadvantage themselves for greater long-range advantage. That is similar to making a temporary mental discontinuity so that a long-range larger continuity may arise perhaps in the form of an aha! Such an aha! may generate self discipline; self-direction. As was earlier said, self-direction is tantamount to self organizing which is the core of life. Life has not yet been clearly defined yet we know some of what it is. Can it be increased or better accepted as it is for greater long-range well-being?

Dear Albert,

This a short note to mention Freeman Dyson said about you. Dyson said: "The reason he was such a revolutionary was that he was much more aware than other people that there were still a lot of deep mysteries." He also said of you; "He asked much more penetrating questions."

Your proximity to Zen practice of which you never mention needs mentioning again in the form of a quote from Schwartz and Begley (*The Mind and the Brain*): "Through mindfulness you can stand outside your own mind as if you are watching what is happening to another person rather than experiencing it herself...Mindfulness requires direct willful effort, and the ability to forge those practicing it to observe their sensations and thoughts with a calm clarity of an external witness....One views his thoughts, feelings, and expectations much as a scientist views experimental data - - that is, as a natural phenomena to be noted, investigated, reflected on and learned from. Viewing one's own inner experience as data allows (one) to become, in essence, his own experimental subject."

You have been your own experimental subject in many ways through your thought experiments. I also would say you are your own oracle.

I have recently heard that of the native American, Black Elk, said: "Peace comes within the souls of men when they realize their relationship, their oneness with the Universe and all its powers, and when they realize that at the center of the Universe dwells the Great Spirit, and that this center is really everywhere. It is within each of us." I'm led to believe Einstein did not move to the point of "not knowing" of Zen masters yet he cherished the mysterious which may be considered an element of "not knowing." About this Stephen Batchelor

You have said Albert that the great spirit referred to by Black Elk is the universe. This is similar to Thomas Merton's notion that the great spirit is god when he said: and "God is a

circle whose center is everywhere and whose circumference is nowhere.” As Steven Covey said: “Anything less than a conscious commitment to the important is an unconscious commitment to the unimportant.”

Perhaps we may use these notions heuristically. Webster’s dictionary defines heuristic: “providing aid or direction in the solution of a problem that otherwise unjustified or incapable of justification - - of or relating to exploratory problem solving techniques that utilize self educating technique (as the evaluation and feedback) to improve performance.” I hope to hear from you soon.

Cordially,

H. A.

## YOU ARE YOUR OWN ORACLE

As Tom Butler-Bowden said: “Education is to help us understand the whole process of life. Education is about how to love, how to live simply, how to free our mind from prejudice. Without this knowledge we will walk through life in an almost mechanical way, instead of becoming the truly creative person we could be.”

It is worthy to repeat that some training is a part of education, but because we have been so enamored with security and certainty, we do not attempt to develop characteristics which are

more difficult to define. As a result of that lack of development, awareness, open mindedness, self-direction and independent judgment have been noticeably reduced.

Balance is a goal of wise societies. Balance avoids over-specialization. Open inquiry and open-endedness to develop presently aware, self-directing, courageously judging people needs to be moderately curtailed in medical schools for medical doctors since time is limited, and one doesn't want somebody taking out one's appendix by exploring an incision on your left ear.

This applies to other jobs and professions. One can easily tell the difference between a random person picked off of the street and a brain surgeon when doing brain surgery. The differences between a reasonably intelligent person picked off the street and an elementary school teacher, cannot be distinguished as easily. This is even true for some high school teachers and university professors.

Putting up with some fuzziness when developing open-ended inquiry, present awareness, and general open-ended judging, can help one better know and understand that decisions are sometime trivial and sometime crucial for health and well-being.

The Institute of Noetic sciences reports that research (on openness and transformation) “reveals that many people experience fundamental shifts in their sense of self and their way of being in the world. Although people's individual experiences differed widely, a golden thread of commonality shone through them all that involved a radical broadening of worldview and redefinition of identify, meaning, and purpose in life.”

Steven Pinker Reports: “Questions once confined to theological speculations and late-night dorm-room bull sessions are now at the forefront of cognitive neuroscience. With some problems, a modicum of consensus has taken shape. With others, the puzzlement is so deep

that they may never be resolved. Some of our deepest convictions about what it means to be human have been shaken.”

What may be a paradox when looking at open, aware, self-directedness is that the more one becomes self-directing, the more kind one often becomes. The kind of self-directedness I am speaking about is Einstein’s who saw noticeably greater connection between human beings, and as a result, there is a greater tendency toward increasing cooperation and reducing competition on a world-wide scale.

Einstein saw this to be true as evinced by of his statement: “The true value of a human being can be found in the degree to which he has attained liberation from the self.” Perhaps one cannot attain liberation from the self unless and until one is self-directing. Training alone will not bring about self-direction. Without aware, self-directed judgment one will not know and understand what needs to be known and understood until someone else tells them. If one only knows what someone else tells them, they are not educated.

Because our schools and universities have failed in developing our open, aware, self-directed judgment, we tend to maintain the power of the governmental-industrial complex which is often the continuation of the rich getting richer and the poor getting poorer. As Celina Su said in the N.Y .Times, May 8, 2009: “The students, my colleagues and I spoke with complex analyses of the ways in which school conditions prevented them from learning.” Su is a co-author of a book about black and Latino teenagers and education policy.

The 6/17/09 NY Times, Virtues of Distraction, said (and as Begley made clear)

More than any other organ, the brain is designed to change based on experience, a feature called neuroplasticity. London taxi drivers, for instance, have enlarged hippocampi (the brain region

for memory and spatial processing)—a neural reward for paying attention to the tangle of the city’s streets. As we become more skilled at the 21st-century task Meyer calls “flitting,” the wiring of the brain will inevitably change to deal more efficiently with more information. The neuroscientist Gary Small speculates that the human brain might be changing faster today than it has since the prehistoric discovery of tools. Research suggests we’re already picking up new skills: better peripheral vision, the ability to sift information rapidly. We recently elected the first-ever BlackBerry president, able to flit between sixteen national crises while focusing at a world-class level. Kids growing up now might have an associative genius we don’t—a sense of the way ten projects all dovetail into something totally new. They might be able to engage in seeming contradictions: mindful web-surfing, mindful Twittering. Maybe, in flights of irresponsible responsibility, they’ll even manage to attain the paradoxical, Zenlike state of focused distraction.

Einstein strongly spoke against the modern methods of instruction. John Tarrant remarked: "If you were to put aside what you know because of what other people told you, how much of what you know do you truly know for yourself. If you look for the origin of your thoughts, of your life, of your universe, can you find it? Can you find where this moment comes from or where it goes home to?"

Paying close attention to one's present experience helps one liberate oneself. Ahas! arise from attention to one's present experience. Zen and education produce ahas! as Einstein did. We cannot be educated without some training but education for self-direction and liberation from a separate self has been neglected because of a surge of specialization. Specialization often pays attention to the there and then (avoiding the here and now). Perhaps physics has no now because we have specialized too far too often. Specialization without the ability to generalize often makes trainees serve the purposes of powerful others. Specialized generalists can more easily avoid this slavery and therefore choose to be kind.

Our society is still not kind to people of color. As Attorney General Eric Holder said in early 2009, we have been cowards about reducing racism. Give kids good schools.org 5/21/09 said: "This week (5/21/09)we recognize the 55th anniversary of the U.S. Supreme Court decision in *Brown vs. Board of Education*, declaring that students could not be taught separately, solely on the basis of their race. A new report describes how poorly the nation has upheld its commitment to quality and equitable education, revealing that minority and low-income students have only half the opportunity to learn in our public schools as their white non-Latino peers."

This cowardice will change when we have more education graduate students like the one far on the road to becoming his own oracle. He speaks about what he will explore in a master's thesis. Many graduate advisors would not give the freedom for a graduate student to do what he said:

As for my thesis, I'm a master's student so it's just a 'little' thesis I'm beginning work on. This explanation will be wordy and vague but at this point I'm pretty sure that it'll be a narrative piece

where I hope to dig at and grapple with some of the presuppositions--we might say paradigms--about knowing and knowledge that have implicitly and explicitly come my way as a student and budding teacher--as a person, really.

So it's a journey in personal awareness of the presuppositions I bring to teaching and learning. The other side of the coin is that searching for self-understanding is a search for authenticity in actions as well. Trying to work towards authenticity in a very structured community, where teachers' and learners' goals are so clearly set out, possess obvious challenges. That, I think, is the central tension my thesis will be born of.

Jonah Lehrer speaks of the dopamine release with a feeling of pleasure on anticipation of what previously created the dopamine release prior to anticipation. My survey of students reveals most students do not anticipate their classroom experience to bring a dopamine/pleasure reward from most school or university classes. The exception is for students who are free to evaluate themselves when they study what is interesting, remarkable, and important for them.

Neuroscience has not yet made definite findings indicating that students learn more profoundly when they are free to decide for themselves what, when, and how to study. By asking yourself, (under which conditions do you best powerfully learn life lessons to hone your judgment) may be a clue to lead you to promote more freedom for students.

By freedom I do not mean freedom to choose between the even or odd numbered questions in a math book. I mean freedom to decide what is important to study and how to study it. Frequently, students are not free to choose from a wide variety of courses. Their electives are often few except in free schools. An example of classroom freedom is given by Pulitzer prize winner and teacher Frank McCourt.

William Grimes wrote: (New York Times July 20, 2009, p. A 15.) "He even had his students test themselves. When they wrote their own tests, they asked questions they wanted answers to and then they answered them," Mr. McCourt told the journal *Instructor*. "It was grand."

What I have been writing about is providing of conditions whereby a future teacher will approach what s/he is doing with her or his learning and life. The majority of teachers and professors today, do not seem to be aware the excessive obedience to authority mindset is so widespread.. This graduate education student is modeling much of what Einstein and Zen Master's are alluding to. He is the kind of teacher I want for my children and grandchildren.

There is a high non-numerical correlation between what Einstein said and did and what Zen practitioners do. The correlation is not near .99. Einstein, as far as I know, never spoke of Zen or nonduality. His statements and behavior about doing things for others clearly relates to the Zen notion of compassion. The Zen Sutra, the Prajnaparamita, begins with: "The Bodhisattva of great compassion." A Bodhisattva is a Zen practitioner who realizes that he or she will not be enlightened or reach nirvana until everyone is enlightened. He or she helps awaken others. In so awakening, he or she is also awakened.

While Zen can appear to bring with it a variety of uncertainties, it may bring us closer to notice what is inherent in the notions, "process is reality" and "reality is process." There is

nonduality between process and reality. Process and reality can be one, as a cup is what space is doing in that place at that time. Process is what reality is doing. Zen “education,” with its focus on noticing ordinary present experience - -hearing what you hear - - seeing what you see, etc. - - can help students see that life is no longer a problem to be solved but is just to be lived.

David Loy, in his *Nonduality: A Study of Comparative Philosophy*, elaborates on four nondualities, the last of which is an elaboration on the nonduality of duality and nonduality. According to Loy, we can interpolate from nondual experience to explain duality. We cannot move from dualistic experience to explain nonduality. The way of noticing the difference between nondual and dualistic is to look at a cup using different lenses. The first dualistic lens helps us see a cup in space which is separate from the cup itself. The second, nondual lens, may help us see that a cup is what space is doing in that place. The dualistic lens shows a cup being in space which is separate from the cup itself. The second shows the cup and the space are one.

Loy said: “What kind of thing is direct reality before we have as yet heeded the complexities of thought? That is, what kind of thing is an event of pure experience? At this time there is not the opposition of subject and object. There is not the separation into intellect, emotion, and will. There is only independent, self contained, pure activity.” The talk of Zen within a dual paradigm is difficult. Some of Zen appears to be abstract only because Zen is so concrete and continuous in the present moment.

When Loy speaks of nondual practice, he is speaking within a new paradigm which cannot be measured in terms of the old paradigm. For instance in the old paradigm, immutability is different from impermanence. “This” is different from “that.” Self is different from an object outside the self. Substance is different from form and emptiness has no form. Within the

nondual paradigm, emptiness is not other than form and immutability is not different than impermanence. This is not different from that. The self is not different from an object.

Loy asks whether or not we can nondualistically comprehend nondualism. What is unique to thinking about the nature of thinking, according to Loy “is that what is to be grasped and what it is to grasp are the same thing yet another type of ‘nonduality.’ This makes thinking both the easiest thing to comprehend and the most difficult. In the usual sense it becomes impossible just as a hand cannot grasp itself and the eye cannot see itself.” That is similar to the Zen idea of that which we are looking for is that which is looking. Loy elaborates on the notion that any method or technique understood to lead to enlightenment experience maintains the very present-future, cause-effect dualism that it is trying to escape.

Causality, according to Loy, being the root category of thought is the one most in need of deconstruction. If you deconstruct it, its “root categoryness,” will also be deconstructed. Shifting paradigms will put “root categoryness” and “causality” in its proper place within a nondual framework. Its proper place is to see the person doing the root categorizing and the root categorizing as one - - the seeing is also part of that one. A nondual lens can help one see that. Loy says we can posit nonduality as we had previously posited duality - - cause/effect, subject/object, etc.. Dualists, however, rarely see duality as posited probably because it is so obvious. It is obvious, however, only when looking through a nondual lens.

One beauty of Zen is that we can continue to use a dual paradigm if we choose to - - one must be aware of it in order to choose it. Can we legitimately say that one is not aware of a dual paradigm unless one is aware of nonduality? Nonduality helps us see that the dual paradigm is but another aspect of the nondual and not totally separate from the unit of which it is a part. When operating nondually, one will be aware that one’s use of words - - talking about duality is -

- is a re-presentation which often keeps us from being aware of presentation - - presentation = present experience.

Narrowness in the selection of evidence is one of the ways of distinguishing process philosophers from philosophers who hold to fixities. Those who hold fixities say that substance is processed. Substance isn't processed from a broader perspective. The substance and processing are one. Process is processing. Dualistic philosophies tend to place experience in categories. Nonduality breaks the categories and, as result, deals with more of what can possibly be experienced ( a broader selection of evidence). For dualistic philosophers, if there is no category for something, that something cannot be experienced.

In mainstream dualistic philosophies, what is the concept or the thought that is represented by the concept? In nondual philosophies, the ineffable does not need to be stated. In Zen meditation - - aimless awakening - - awakening for the sake of awakening with no other aim is practiced so the practitioner can be aware of what is.

## Chapter 14

### WHOLE PARTS

Our deeds determine us, as much as we determine our deeds. --*George Eliot*

Because of the difficulty in communicating about Zen and some of Einstein's ideas, an elaboration about both may be helpful. Einstein's ideas may be said. I previously mentioned Zen values. Zen has no separate values. Any ideas about Zen are not Zen. Why? Einstein approached Zen ways of being by demonstrating his open looking and his doing things for others rather than for his un-liberated self. He said the true value of a person was one's liberating one's self from the self (getting rid of a separate self as Zen practice does). Like a hologram, parts are always parts of a whole, and the whole is contained in each part as the wave and the ocean are one.

Although he does not say Zen, Duane Elgin reminds us:

“Despite the utter simplicity of being consciously watchful of our lives, this is a demanding activity. At first it is a struggle to just occasionally remember ourselves moving through the daily routine. A brief moment of self-remembering is followed by an extended period where we are lost in the flow of thought and the demands of the exterior world. Yet with practice, we find that we can more easily remember ourselves -- while walking down the street, or while we are at home, at work, at play. We come to

recognize, as direct experience, the nature of knowing that we know. As our familiarity with this mode of perception increases, we get lost in thought and worldly activities less and less frequently. In turn, we experience our behavior in the world as more and more choiceful, or voluntary. The conscious knowing of ourselves as we live our lives affords us insight into the workings of the ego. We are increasingly liberated from habitual and automated patterns of behavior, thought and feeling.”

Zen master Wuzu said: “Talking about Zen all the time is like looking for fish tracks in a dry riverbed.”

The Zen master Yuanwu said: “When you are free and independent, you are not bound by anything, so you do not seek liberation. Consummating the process of Zen, you become unified. Then there are no mundane things outside of Buddhism, and there is no Buddhism outside of mundane things.” He also said: “Eventually you’ll reach the point of a moveability, where you can pick up Zen and use it, putting away and letting it out expertly.... As soon as you try to chase and grab Zen, you’ve already stumbled past it.... You do not have to obey in worldly activities in order to attain effortless unconcern. You should know that the activities and effort are not two different things - -but if you keep thinking about rejection and grasping, you make them into two.”

These quotes illustrate the difficulty in attempting to understand Zen. Abraham Kaplan’s ideas are used because he talks around Zen in a relatively clear way so as to give the impression that Zen is something that can be understood. As was mentioned, Zen Masters

hold that talk about Zen is not Zen. Answering the question, "What is Zen," is difficult as is answering the question, "What is quality in thought and statement."

Einstein never spoke of Zen as far as I know, yet he exhibited central Zen characteristics such as being one with everyone. Being one with everyone and everything is an outgrowth of being aware of what is. Compassion and kindness arise when one is aware. Knowing that one does not know is cherished by many Zen practitioners. Einstein, may have implied the value of avoiding excessive intellectual knowing when he said: "Most people say that it is the intellect which makes a great scientist. They are wrong: it is character."

Some Zen masters have said that even though all people being at ease is unattainable, they vow to attain it. Much of what Einstein said related to compassion and kindness, and it is from this that one can conclude he was very much in tune with Zen. It may be said that the following quote of Einstein grasps the essence of Zen and is what is not sayable about Zen. "The true value of a human being can be found in the degree to which he has attained liberation from the self."

Yuanwu also said that beyond cleaning ourselves of concepts is a boundless, fathomless, and measureless more that still can be realize. Yuanwu asks us to take away all slogans and intellectual views that cling to us, to empty our minds so that we do not manifest any thoughts on our own, and so that we do not do anything at all. One might say that Zen is non-heuristically heuristic, or heuristically non-heuristic. As Gregory of Nyssa said: "Every concept grasped by the mind becomes an obstacle in the quest to those who search." Excessive searching can prevent awareness of what is happening as it is happening. Besides the noble art of getting things done, there is the noble art of leaving things undone. As Lin Yutang said: "The wisdom of life consists in the elimination of non essentials."

In an Institute of Noetic Sciences video, Joan Borysenko talks about something similar to Einsteinian/Zen learning to learn. She states people can do things to become more centered and open and curious and, when they do, (perhaps partly through what Begley describes as brain training, brain changing) their actions shift more from a state of peacefulness and centeredness to having those qualities become a trait in their daily behavior. When difficulties arise for them, ordinary living equals enlightened living. Borysenko's book, *Inner Peace For Busy People* relates to helping one notice that the nature of one's true nature is peace, compassion and gratitude. Her video reveals she is a model for that kind of centered Zen living.

As was said, any set of words attempting to describe Zen is not Zen. Zen is direct experiencing. What is experienced when one is enlightened, cannot be said. Sheldon Kopp's eschatological laundry list mentioned "this is it" first.

Begley reported: "Attention, for instance, seems like one of those ephemeral things that comes and goes in the mind but has no real physical presence. Yet attention can alter the layout of the brain as powerfully as a sculptor's knife can alter a slab of stone."

... "Through attention, UCSF's Michael Merzenich and a colleague wrote, 'We choose and sculpt how our ever-changing minds will work, we choose who we will be the next moment in a very real sense, and these choices are left embossed in physical form on our material selves.'"

"The discovery that neuroplasticity cannot occur without attention has important implications. If a skill becomes so routine you can do it on autopilot, practicing it will no longer change the brain. And if you take up mental exercises to keep your brain young, they will not be as effective if you become able to do them without paying much attention."

Begley reports neuroplasticity allows brains of any age to change their structure and function in response to experience. Begley said: “Even the visual cortex, which you would think is pretty hardwired, can switch from processing sight to processing touch if you were blindfolded for just five days.” A Canadian Medical Doctor is experimenting with using one’s tongue as a tool to enervate the visual cortex when eyes are blinded by optic nerve malfunction.

Eschatology is the study of last things. Thomas Merton said: “Eschatology is something never realizable and yet realized at every moment in our life. We see it always ahead of us though we are in reality always in it. This is the delusion we are conditioned to have as beings in time rather than as ‘becomings’ in time. The delusion ceases to be one the very moment we experience all this.”

Merton also said: ...”The chief characteristic of Zen is that it rejects all systematic elaborations in order to get back, as far as possible, to the pure and unarticulated and unexplained ground of direct experience.” It is the direct experience of life itself.

Merton continues:

The whole aim of Zen is not to make foolproof statements about experience, but to come to direct grips with reality without the mediation of logical verbalization... The Bodhisattva elects to remain in it and finds in it his nirvana, by reason not only of the metaphysic which identifies the phenomenal and the noumenal, but also the compassionate love which identifies all the sufferers in the round of birth and death with the Buddha, whose

...A Zen master was once asked:

Question-- What is the Tao? - - (We may take Tao as meaning the ultimate truth or reality –the way)

Answer - - It is one's everyday mind.

Question: What is one's everyday mind?

Answer: When tired, you sleep;

When hungry, you eat.

### EINSTEINIAN UNCERTAINTIES

Erich Fromm said: "Creativity requires the courage to let go of certainties." I have partly projected an Einstein/Zen connection yet some connections may have been stretched. Einstein not only noticed that  $E= mc^2$ , he also noticed that we are more connected than separate, and that it is more in harmony with nature and the universe to do things for others than to be selfish with what one does and has. Research on altruism supports this.

The poem about the six blind men going to see the elephant applies here. Each blind man felt a different part of the elephant and drew conclusions on the basis of limited experience. Each of us has limited experience including Einstein and Zen masters. In light of the discovery that only 4% of our universe is matter and energy, we may even know less than we previously thought. Everything said above and below is very limited yet we still may be heuristic even in the light of knowing less, may be knowing more.

The New York Times reports a decrease in humanities degrees awarded between 1966 and 2004 from near 18% of graduates to near 8%.

The letter to the editor below gives an Einsteinian view of the decrease.

“It is shockingly inappropriate to reduce support for the humanities when most of the problems we are faced with in the nation and the world are the result of deficiencies in integrity and ethics, not deficiencies in vocational skill sets.”

“The subtleties of civilized living require an understanding of human functioning through centuries of ethical dilemmas, missteps and their consequences. Searching for meaning and purpose in our lives is not a trivial matter to be left to M.B.A.’s — we’ve tried that already.”

John W. Worsham, San Antonio, Feb.26, 2009, Retired Director of Graduate Studies in Psychology at Trinity University.

A simple example of the beginnings of a possibility of thinking something that can’t be found in textbooks will appear below as a blank space.

A much simpler example that also can’t be said is alluded to even though such alluding may violate thinking something that can’t be learned from textbooks. From a Zen point of view, this allusion would be delusion. From a Western dualistic point of view (our normal view) the following is said.

What some Zen practitioners found, through the kind of paying attention to their present experience, is what former Vice President Al Gore and consultant, Tony Robbins, concluded in their discussion: “the conviction that giving is the most important and fulfilling action in

life “(reported by Nipun Mehta). Giving is often kindness for which The Dalai Lama said: “My religion is kindness.” Einstein was kind.

Again, Henry James said there are three things important in life. The first is to be kind, the second is to be kind, and the third is to be kind. This is what Zen masters call compassionate wisdom. Being compassionate is being kind. When one is compassionate and/or patient, one is awakened.

A danger in taking a view too large is that we won't see trees but only a forest. The danger with taking a view too narrow is that we would only see trees, or parts of trees and certainly no forest. In order to gradually move to an optimum point of seeing, and noticing what areas are most helpful to be aware of, we could profitably use heuristic hypotheses which are more easily seen when viewed through the lens of heuristic paradigms. Much of Einstein's thinking was heuristic as is the behavior of Zen Masters. Useful implies useful for a purpose. Can a purpose simply be awakening? Activities that are purposeful in themselves are more difficult to measure and define. Education, awareness, creativity, openness, and freedom are processes and are for themselves.

Training is often not for more training. When the journey and the destination are not separated, education and training may be considered one. Schools, however, separate journeys and destinations and as a result, students are graded A or B or C, or D, or F when they remember what is told by teachers and professors. Zen and Einstein would leave many events, including school learning, ungraded.

It is posited that most researchers do not publish heuristic papers and they are not involved in break-through research. In order to do break-through research, at times, it may pay to be somewhat more daring than is usually accepted in the scientific community. We have been

trained to excessively fear mistakes, and as a result, we are overly closed to openness. We need openness to the degree Einstein and Zen practitioners were open. Nobel Laureates were more daring than usual. They had the courage not to know what others knew.

Einstein said: "When I examine myself and my methods of thought, I come to the conclusion that the gift of fantasy has meant more to me than my talent for absorbing positive knowledge."

The canons of scientific investigation hold that one should not observe one's observing while one is observing since that will lead to confusion and infinite regress. As has been said, that holds true for a universe which is clearly defined. Ours isn't.

Might we say, in the light of our knowing only about 4% of the universe, we know very little. It may be profitable to be more daring in hypothesis formation as well as paradigm generation if we are to generate helpful ahas! Remember a noted psychologist holds that by around 2024, our fund of knowledge will be doubling every 17 days.

Adding to this, Ray Kurzweil's prediction that we will have 1000 times more technological change in this century than the last, might help us conclude with Kurzweil that all growth curves are moving toward a singularity, which when reached, nothing will be known. From a Zen point of view, if Zen had blessings, (it doesn't) this may be a blessing since not knowing, in the intellectual sense, is highly valued by Zen practitioners.

Richard Rohr said the original sin of eating the apple by Adam and Eve was wanting certainty. Let us for a moment forget about Zen and look at hypothesis formation and paradigm generation which may be most helpful to everyone. Related to this is Einstein's statement from: *The Daily Book of Positive Quotations*: "True religion is real living; living with all one's soul, with all one's goodness and righteousness."

Except for serendipitous findings, the boundaries of break-through research probably include uncommon hypotheses. Uncommon hypotheses often push boundaries of current paradigms. Pushing boundaries of common paradigms often result from heuristic thought experiments.

Thought experiments are infrequently given attention in many science journals although Sharon Begley used the idea in a late November, 2008 Newsweek column. Physicists at the Cern LHC are searching for a Higgs boson which some physicists call a “god particle.” If a Higgs particle is found it would be another indication of now is the time for heuristic thought experiments. It may be time even if the Higgs is not found. Maybe heuristic thought will be needed to find a Higgs. Some physicists are projecting that the Higgs particle is similar to a field in which other particles operate. Science often concerns itself with certain arrangements of certain sets of particles/elements. May it be useful to consider what effect the Higgs particle may have on physics, chemistry and biology? What affects might the Higgs have on education, economics, and other social sciences? How does the Higgs relate to “now?”

About “now” Sharon Salzburg said: ... “We need to use our power to inquire, to wonder, to explore our experience to see what is true for ourselves. This requires us to approach life with an inquisitive, eager, self-confident capacity to probe and question. It requires us to examine where we place our faith, and why, to see if it makes us more aware and loving people. To develop a verified faith we need to open to the messiness, the discordance, the ambivalence, and, above all, the vital life-force of questioning. If we don’t, our faith can wither. If we don’t, our faith will always remain in the hands of someone else, as something we borrow or abjure, but not as something we can claim fully as our own.”

“Now” is messy, and discordant. Einstein agrees with wondering, questioning, being inquisitive and much of what Salzburg said. Salzburg is a Zen Master.

While it is easier to understand projected small steps from “chemical to “biochemical” to “electro-biochemical,” Buckminster Fuller’s notion that large gaps (as one side of a canyon to another) cannot be jumped successfully in two steps. This relates to large gaps and larger leaps involving more uncertainty and more quality guessing than is common. It deals with potentially stretching paradigms which may provoke unusual hypotheses surrounding  $E = mc^2$  and chemistry, biology, and technology as well as other fields. Larger leaps involve more uncertainty which more openness often generates. Openly accepting more uncertainty may be and Einsteinian mind opener/educator’s zero.

Einstein was heuristic in many ways even though he never fully united quantum mechanics with the macro universe of gravity. It is interesting to note that different places are differently affected by gravity. A dictionary definition of heuristic is: “providing aid or direction in the solution of a problem that otherwise is unjustified or incapable of justification - - of or relating to exploratory problem solving techniques that utilize self educating technique (as evaluation and feedback) to improve performance.” Heuristic and self educating together—interesting!

In order to make some of the leaps over presently existing large gaps, it may be useful to notice that some of Einstein’s great discoveries arose from his use of imaginative and intuitive thought experiments. The physicist, Witten, through thought experiments and mathematics, united five string theories into M theory. Part of M theory includes membranes (hold on) some of which may be as large as the universe. Other physicists are now disputing the value of string theories because of no known possibility of verification. Other physicists continue to

work on these theories of everything. Expanding contexts helps increase breakthrough research. Might we be open to find that we know we don't know, or which may be similar to understanding that we don't understand?

What if we started with a thought experiment as Einstein might start? Making discoveries depends on testable hypotheses. Break-through research requires expanding contexts. Expanding contexts requires open thinking and a willingness to be criticized for mistakes made in terms of bold hypothesizing which may need more time and thought to be testable i.e. (string theory). Expanding contexts influences paradigms in which hypotheses are formed. While hypotheses may be infinite, for practical purposes they are limited. One way to extend biochemical technology is to expand its context with an "electro" element as well fuzzy aspects "beyond an electro element." Infinite context expansion may show what was thought to be absolute multiplicity to be a unit (perhaps that macro, unnamed, opposite of an infinitesimal). What if schools were noticeably more heuristic?

Einstein would agree with Rabindranath Tagore who said: "I dreamed and saw that life was joy; I awoke and saw that life was service; I took action and saw that service was joy," Training alone will not develop such insight.

I'm led to believe Einstein did not move to the point of "not knowing" of Zen masters yet he cherished the mysterious which may be considered an element of "not knowing." "not knowing" assist can creativity.

Self direction is similar to self creation. From a Zen Point of view, Stephen Batchelor said: "Self creation entails imagining yourself in other ways. Instead of thinking of oneself as a fixed nugget in a shifting current of mental and physical processes, we might consider ourselves as a narrative that transforms these processes into an unfolding story. Life becomes

less of a defensive stance to preserve an immutable self and more of an ongoing task to complete an unfinished tale.”

It is posited that expanding biochemistry to include an electro element eventually connects to  $E = mc^2$ . What do you think? Or is it stupid to ask since what doesn't connect to  $E = mc^2$ ? Do dark matter and dark energy connect as energy and matter do? Is it fair to say that biologists do not know what life is, and mathematicians do not know what proof is, and philosophers do not know what truth is?

Philosopher May, reminds us that, “A problem here, an inconsistency there, a perspective on a particular issue to be worked out” is what most thinkers use to create a pattern. May continues: ...“What that pattern is might be reinterpreted by later generations.... A pattern that might not have been noticed beforehand, might now make sense.” May alludes to the idea that frequently a pattern is rarely noticed until attention is given to it, often by wide variety of thinkers.

May adds to Haldane's ideas by saying: “Suppose we consider the possibility that there is more to our world than we can perceive, and more than we can conceive...” By examining what is interesting, remarkable, and important, more sense can be made than the limited sense contained in the use of fixed representations. Gilles Deleuze, the French philosopher, and May are saying that much change recently has occurred, and it is now time, “...to have the courage to look and not know what everyone else knows.” As a result of not knowing what everyone else knows we may be able to examine and form unusual hypotheses possibly leading to breakthrough findings.

Kurzweil's prediction of unprecedented rapid change may indicate a need for greater multidisciplinary research as well as more openness to what may have previously been considered impossible.

Some dissonance can be productive tension as Suchman found. Productive tension produces growth and development and perhaps greater continuity. As Gleiser said in breaking with other physicists, nature isn't that way (isn't unified in the sense of a theory of everything uniting quantum mechanics and gravity).

As was earlier mentioned, world growth curves are predicted to come together at which time it has been said that no one will know anything. If our fund of knowledge, by 2024 will be doubling every 17 days, by the year 2100, (or before) it is conceivable, if the growth rate continued, that our fund of knowledge may be doubling every few seconds. That would seem to have the effect of virtually reaching a singularity. If one is educated to pay attention to one's present experience, one has within them everything needed to know what they need to know and do at any given time. What about any given "now?" An implication of knowing what one needs to know at any given "now," is they will know "it" at any other "now." If you want to know what you will be doing "then," look at what you are doing "now." As Lao Tzu holds, as do many Zen practitioners, any "it" that can be said is not the "it". One being educated to paying attention to one's present experience may find that acceptable.

A singularity, as Kurzweil is using the term, seems to be unknowable according to current paradigms. As new paradigms emerge, it is projected that emptiness, may later be seen as similar to fullness. Knowing nothing may be the equivalent of knowing everything (everything one needs to know at any given moment, in order to be peaceful and harmonious

as well as compassionate, is projected to be knowable, but not expressible, by one educated in paying attention to what is.

Zen masters may also experience the agony of not knowing, but for some of them that not knowing (intellectually) becomes that which is cherished. When one accepts “not knowing” in everyday living, that may be the equivalent of samsara (ordinary living) equalling nirvana. Einstein found “the mysterious” (a possible form of “not knowing”) enjoyable to wonder about.

Nature, as we know it, is often “explained nature.” There may be as many explanations as there are explainers some of which may not be supported by data. Since we use words to explain, a predicate that is not different from the subject is not illuminating nor informative. When subjects and predicates are different there is no unity. The problem may be “explaining.” If we know only 4% of the universe, is it fair to say that we can explain only 4% of all events? If so explaining only 4% is almost equal to not knowing (at least not knowing much).

Jay Dixit said:

Mindfulness is the only intentional, systematic activity that is not about trying to improve yourself or get anywhere else, explains Kabat-Zinn. It is simply a matter of realizing where you already are. A cartoon from *The New Yorker* sums it up: Two Zen monks are sitting side by side, meditating. The younger one is giving the older one a quizzical look, to which the older one responds, "Nothing happens next. This is it."

You can become mindful at any moment just by paying attention to your immediate experience. You can do it right now. What's happening this instant? Think of yourself as an eternal witness, and just observe the moment. What do you see, hear, smell? It doesn't matter how it feels—pleasant or unpleasant, good or bad—you roll with it because it's what's present; you're not judging it. And if you notice your mind wandering, bring yourself back. Just say to yourself, “Now. Now. Now”.

About “now” Einstein, at age 17, for a school exam said: “A happy man is too satisfied with the present to dwell too much on the future.” "My Future Plans" The Collected Papers of Albert Einstein Vol. 1 (1987)

Within the last 10 years, shifting responsibility to students has occurred in public schools. The shift seems small relative to what is needed when considering the extensive and excessive control by schools. The shift in Streamwood, Illinois is slowly spreading. The shift allows students to lead parent-teacher conferences. The shift is significant in that control and management by schools of students had been so excessive for so long that it was barely noticed. We learn responsibility by being responsible. Under the guise of teacher and parental responsibility, parents and teachers are overly responsible for students.

The student lead Streamwood type conferences were started ten years ago by John Osgood in Minden, Nebraska. Students leading meetings with teacher and parents uses the students right-brain hemisphere; a place where schools seemingly fear to tread. The fear partly arises because of the difficulty in measuring imagination and resourcefulness, and because teachers have been trained to excessively manage to the point where it amounts to excessive student

control. Extending student responsibility to having the students explore and study what students find remarkable, interesting, and important may be around the corner as we pay more attention to what is. Free schools already do it.

Aspects of Eastern thinking helped generate quantum physics about which Einstein had reservations. Einstein's thinking went beyond East Asian and Western thinking and was even more unified than East Asian thinking. Einstein thought a great scientist was also a great artist.

Expanding contexts (moving towards uniting physics, chemistry, biology, and beyond what is now known) allows one to increase sense impressions. According to the July, 2008 issue of Wired, when considering petabytes (1 petabyte=1024 terabytes) causality may take second place to correlations. Most scientists may disagree but suppose a trillion petabytes of data are considered? Can a human simultaneously consider a trillion petabytes? ) Einstein chunked large amounts of data into wholes which could be more easily noticed and used as expert chess players chunk chess boards when rapidly playing multiple chess games. Randomly placed chess pieces can't be easily chunked.

As contexts continually expand, Einstein's thinking of cause and effect alludes to the non testable notions that are beyond what is commonly considered science. What are these non testable notions and may they be someday testable and scientific? How can we find out? What heuristic thought might you have right now that would be beneficial to finding out? We often think one's present experience (one's now) in terms of fixities. Process is not clearly definable. That may be why silence and not knowing are cherished by Zen masters. Paying attention to one's present experience (one's now) allows one to pay attention to one's

processing while one is processing. Such processing can only happen in the present, and can't be fully said.

Note what John Dewey said in *Reconstruction In Philosophy*, 1920:

“The great systems of Western philosophy have all seen themselves as dealing with something which has variously been termed Being, Nature, or the Universe, the Cosmos at large, Reality, the Truth. Into this state of affairs there recently entered the discovery that natural science is forced by its own development to abandon the assumption of fixity and to recognize that what for it is actually ‘universal’ is process; but this fact of recent science still remains in philosophy, as in popular opinion up to the present time, a technical matter rather than what it is: namely, the most revolutionary discovery yet made.”

Of course we need balance between excessive expansion of contexts and contexts excessively limited. How often do physicists, chemists, and biologists refer to differences between balance and balancing? “Balance” represents a fixed event whereas “balancing” signifies the dynamism of “becoming.” “Balance” more closely involves an identity/being, and “balancing” is the process of becoming through noting “difference.”

May's book: *Gilles Deleuze: An Introduction*, demonstrates how an updated “difference” ontology helps one know by knowing how something is different from something else. The old identity ontology merely deals with disconnected identities which appear to remain fixed and not in process. As Juan Ramon Jimenez said: “A permanent state of transition is man's most noble condition.”

Would balance between precision and flexibility help us prepare for not only change but rapidity of change? Paradoxically, the facilitation of the goals of expanding contexts create conditions whereby goals to be attained in the future are seen as highly connected to the

noticing what is happening, as it is happening. Noticing is a becoming; a process. Noticing (awareness) always happens in the present and always includes one who notices as Heisenberg found.

Dear H.A.

After reading Kaplan, Merton and Sluyter, I find myself interested in the noticings of these noticers. I find Sluyter helpful in his statements about aware paying attention. He suggests that in order to become more aware of awareness, we carefully notice a dollar and a penny. He said: "Notice the penny is round, brownish, and smooth, and the dollar is rectangular, greenish and crinkly." He also asks us to notice that the sensations of crinkly and roundness etc. are experienced in our awareness. He then asks us to notice closely "whether our awareness is itself brown, greenish and crinkly, or smooth." Here he cautions us and suggests that we take our time in this noticing.... He then notes that it is none of these and awareness is itself pure - - "It has no shape, texture, size, or any sensory characteristics but it is an unchanging, luminous clarity within which arises the ever changing display of sensations." He is saying: "Underlying all perceptions is pure awareness." The awareness: "is in the background of every mind moment. It just needs to be promoted to the foreground." We need to notice "now."

These words are difficult to understand because he is talking about the ground on which our understanding arises. The "not knowing" that Zen masters speak about is somewhat similar to one's understanding that one does not understand. Within all this "not knowing" is a kind of knowing there it is nothing to know in a conceptualizeable sense. As Kaplan said, our

wisdom lies in our living of our lives. He is implying that the wisdom does not come from conceptualizing. Wisdom is not conceptualizeable in a clearly expressible th way.

As was said, kindness is wisdom which also is not clearly conceptualizeable. I do not wish to be confusing. One can only be confused about conceptualizeable events and that may relate to the power of silence. That may have lead Thomas Keating to say: “God’s first language is silence. All else is a poor translation.” As you know, Einstein and Zen masters might say the universe’s first language is silence. Awareness precedes conceptualizing. As several sages have said, conceptualizing can interfere with our awareness of what is.

If we conceptualized less (allowed more right brain operation to make whole brain function would the following report from the New Internationalist be different? "In the last twenty-four hours about forty thousand children, most of them under five, have died in the world. More than 80% of those deaths are from preventable diseases like tetanus, measles, whooping cough, acute respiratory infection, and diarrhea. Such deaths are often associated with malnutrition.”

I just read Maryanne Radmacher Hershey’s idea and I like it. She says: “Live with intention.

Walk to the edge.

Listen hard. Practice wellness.

Play with abandon.

Laugh. Choose with no regret. Continue to learn.

Appreciate your friends.

Do what you love.

Live as if this is all there is.”

As I read about the simultaneous use of fMRI scans and EEG measures, I believe we are getting closer to measuring the power of open-ended inquiry in classrooms. Students could be measured during open-ended inquiry session and measured again during traditional “teacher telling” sessions. As was mentioned, the open inquiry deals more with the hows and the old mindset “teacher telling” deals more with that. Should schools and universities change their traditional mindsets so that students could listen to the lectures they wished to listen to without being tested on them. Brain scans may be used as one form of evaluation.

Also H. A., my recent reading of Teilhard de Chardin, a Jesuit priest perhaps like Robert Kennedy, excites me. He has said what I have grown to think:

“After a couple of decades on this planet, many years of soul searching, and studying the "self," I feel that I am finally closer to knowing myself which ironically seems to be a journey which tells me that the more I understand myself, the less it is that I know. I now can say I have truly felt the difference between the deepest agony of the human condition and the highest state of joy.”

“I know from my own experience that the main difference that lies between "you" and "me" is just a feeling, a feeling of being separate, isolated, lonely, lost, versus a feeling of being whole, connected, at home, and loved. I think most people, if not all, live with a kind of homesickness, a sweet nostalgia which they can't quite put their finger on as if they were once in a place that they can't quite remember but desperately, somehow, want to get back to.”

“The mystics have said for over a millennia that in existence there is a fundamental oneness. There isn't and never has been any division or separation at all. Now science is beginning to agree, as they call this same phenomenon a "Unified Field" or a "Theory of Everything.”

“The trouble then brews when we get lost in our minds. We have a stubborn mind that fills

our being with the deeply-rooted idea that we are separate, a deeply engrained belief that the 'I' is something real. This belief causes a split between what we think in our mind and what we intuitively feel in our hearts, and a division between our head and our heart is formed and strengthened.”

“From day to day, we live from our heads, from our thoughts and as the split between mind and heart ensues, our misery continues. It has been said that while in the womb and even as infants, we are in a natural state of one-ness, love, union, innocence, and bliss. Then, after a while, gradually as we grow up in the world, we begin to realize that ‘I am this and you are that;’ that ‘I am here and you are there,’ and that ‘I am me and you are you.’ We start to feel separate. We become self-conscious. We become afraid.”

“In some ancient eastern languages, the word for ‘separation’ and the word for “fear” is actually the same. We go on and on accumulating knowledge, identity, conditioning, and this sense of ‘me’ gets re-enforced repeatedly and hence the ‘ego’ is hardened and as adults we carry a certain heaviness about us, a worn look, a pained expression, and an overall sluggishness that haunts us and yet we still don't know why.”

The word compassion is the same as de Chardin’s use of “love.” Some find their old desire for greater certainty to be diminishing somewhat as they continue to notice the temporary nature of everything. I hope this clarifies some of our earlier discussions. I wonder if the Zen master, Huang Po, is accurate when he said: "The foolish reject what they see, not what they think; the wise reject what they think, not what they see."

Daniel Goleman notes: “Simply paying attention allows us to build an emotional connection. Lacking attention, empathy hasn't a chance. It is not enough to be intelligent, or

even emotionally intelligent. The rules of the game have changed: we also have to be socially intelligent.”

Please, H. A., let me hear your thoughts on these matters.

Cordially, Albert

Beyond physics, Einstein thought much like Dee Hock who said: “The problem is never how to get new, innovative thoughts into your mind, but how to get old ones out. Every mind is a building filled with archaic furniture. Clean out a corner of your mind and creativity will instantly fill it.”

Functional discontinuity is mainly used in classrooms to put a gap in a student’s knowledge structure so the student will wonder, inquire, and have a greater potential for an aha! Zen awareness points in the direction of simply noticing what is. “What is” is sometimes interpreted as joyful event, that which we want to be closer to so as to avoid a painful or highly inconvenient event. “What is” also includes suffering; that which we desire to move away from. For a Zen practitioner, the word wanting or desiring or wishing or thirsting are keys to suffering. Desire to move towards a more pleasant event, or the desire to move away from the unpleasant is the problem. The Kabbalah alludes to this. Accepting what is, whether it is pleasant or unpleasant is a source of enlightenment unless it is an injustice that can be changed.

Einstein was disciplined. To be disciplined one needs to forgo certain temporary pleasures and sensations for higher and more powerful, long-range, well being (or well becoming). The self discipline of Einstein may be copied and considered as a form of a temporary structured

disadvantage. Functional discontinuity (student stuckness/puzzlement) is a form of structured disadvantage schools could provide as a condition whereby, through greater student freedom, and open, responsive environments, students could learn to temporarily disadvantage themselves for greater long-range advantage. That is similar to making a temporary mental discontinuity so that a long-range larger continuity may arise perhaps in the form of an aha! Such an aha! may generate self discipline; self-direction.

Those who think they know often demonstrate little wonder. Open noticers wonder. As was earlier said, self-direction is tantamount to self organizing which is the core of life. Life has not yet been clearly defined yet we know some of what it is. Can it be increased or better accepted as it is for greater long-range well-being?

Connected to self discipline and use of imagination is Matt Miller's new book, *The Tyranny of Dead Ideas*. Dead ideas relate to Dewey's notion of fixities. Dead ideas are similar to outdated mindsets. He believes our world has changed in important ways and the old ways no longer work. The dead mindset operating in our schools is excessive obedience to authority.

For solutions, Miller speaks about unimaginable solutions when judged in terms of outdated thinking. He says what we have done in the past will not work now. Miller clearly supports Einstein's idea that imagination it is more important than knowledge. Miller's book is very good but he does not mention that any fixed idea is a dead idea. If we dealt more with the process of processing ideas, he would probably be more difficult to understand, but he would be more accurate. Remember John Dewey's statement about abandoning fixities is much more in line with the findings of modern science. Most scientists are only giving fixities (dead ideas) a type of lip-service.

As Thomas Merton states:

The apparently mysterious and cryptic sayings of Zen become much simpler when we see them in the whole context of the Buddhist “mindfulness” or awareness, which in its most elementary form consists in that “pure attention” which simply sees what is right there and does not add any comment, any interpretation, any judgment, any conclusion. It just sees. ...If one reaches the point where understanding fails, this is not a tragedy: it is simply a reminder to stop thinking and start looking. Perhaps there’s nothing to figure out after all: perhaps we only need to wake up...The basic insights of Buddhism are philosophical and metaphysical; they seek to penetrate the ground of being and of knowledge, not by reasoning from abstract principles and axioms, but to reach, through awareness, a state of super consciousness or meta-conscious realization in which subject and object become one.

What is also a common understanding of Zen practitioners is that nirvana and samsara (ordinary living) are one. Accepting what is inconvenient or painful in ordinary living is a key to wisdom. The long-range advantage of accepting disadvantage is great (peaceful being at ease, and harmonious living). The desire to move away from what is a disadvantage may itself be a disadvantage. Meditation may be considered as simply paying attention to what is. One need not be sitting in the cross legged position, or on a chair, or watching one’s breath, or counting. Simply paying attention to “what is” is an advantage even when one notices one desires to do, or have, or be something other than “what is.” Perhaps Lao Tsu and Zen

masters don't often say that is what Zen practice is because people won't believe it, and therefore won't do it. It must be directly experienced rather than intellectually accepted as a truth.

The Exploratorium Museum in San Francisco does much to develop aware, open, self directing development. A series of activities includes Dr. Christine Carter, the GGSC's executive director, spoke interactively (Jan. 9, 2009) on "The Science and Art of Raising Kind Kids." Her interactive presentation is part of the [Goodness! Generosity and the Science of Altruism event series](#). That is Einsteinian and Zenish. It is educational involving learning to learn. "The moment one gives close attention to anything, even a blade of grass, it becomes a mysterious, awesome, indescribably magnificent world in itself." --Henry Miller

The "it" is simply paying attention to what is. This is about the ridding ourselves of desire, through ridding ourselves of our notion of a separate self as Einstein suggested. Seeing oneself as separate enslaves us to desire. That is the problem for which paying attention to "what is" is the solution. There is no a higher or greater activity than noticing what is, part of which is noticing that desire is part of the problem. Zen Masters imply that when one notices what is, one notices that kind and compassionate caring for self and others is peaceful and natural. (Thomas Keating said the first stage of development is that there are others. The second stage is that you are the other. The third stage is that there is no other. Asking and noticing "what is it" or as Eckhart Tolle asks: "Can I be the space for this? facilitates one's becoming kind, wise, compassionate and whole.

“NOTHING” IS “IN” (OR OUT)

A zero is the empty set in mathematics used for doing calculations which were previously unable to be done without it. Might the notion of emptiness (an empty set of empty sets) now be used by educators to approach an educator's equivalent to the mathematician's zero? What might emptiness do for educators that they were unable to conveniently do before the use of emptiness? "Everything" does not exist in the sense that there is no separate thing. One equals one. One is not one more than zero or one less than two. From a Zen point of view (Zen has no views) only emptiness/fullness exists in oneness.

"Doing nothing" is an empty activity when one consciously does nothing. It is something like the "doing" of "not doing." (something like letting go of everything including "letting go.") Teachers promoting student responsibility for student learning can be fostered by a teacher's doing almost nothing. The almost nothing would include the teacher telling the students that they are responsible for their learning but that is not all (as students are in free schools while educators continue to guide toward student self direction.) - - See appendix for information about the Brooklyn Free School and what free schools facilitate.

Teachers now often feel they are responsible for students learning. Some teachers are even given merit pay based on how well their students do on standardized tests. As was mentioned several times, standardized tests often test disconnected "thats". As May has found, "thats" arise from "hows." A student learns how to learn by learning. When the learning relates to hows, rather than disconnected thats, thats too are learned although the order of what is learned is often different from most common school curricula (except for free schools where students generate their own curricula).

As you will recall, an infinitesimal is useful in calculating. It is an amount too small to measure. If we can create an amount too small to measure, can we create an amount too large to measure? I'm suggesting that emptiness, the possible educator's equivalent to a mathematician's zero, coupled with openness, is the equivalent to fullness. Neither emptiness nor fullness can be defined nor can an infinitesimal, or infinity.

The use of emptiness by educators helps shift mindsets from student learning as the responsibility of a teacher to learning being the responsibility of the learner. It changes students who are previously interested in grades and degrees, to learners who are aware, inquisitive, love learning, and openly inquire. There is no name for this opposite of an infinitesimal but it could be considered the educator's equivalent to the mathematician's zero.

The term functional discontinuity has been used to note the production of an empty space in a student's knowledge structure. When such an aware empty space arises in one's mind, one often attempts to fill it. Students frequently will not attempt to fill it if they are "required" to since they will be thinking more of what it is that the outside authority (teacher) wants one to know or do, rather than what they want to know or do based on what they think.

There may be a need for a transition period between a teacher controlled atmosphere and a student controlled atmosphere. The discrepant events (like the sailboat and fan discrepancy (mentioned earlier), along with a freer environment (where students are not graded for their open inquiry or their lack of it), and a responsive environment where students can talk to each other and the teacher regarding information they may need, is very helpful in the beginning of freeing students to openly inquire. Some students may need several weeks or months, and some several years of this before they will be independent learners. A small percentage of students may never become independent learners.

I earlier wrote: "Carlo Ricci, who is unusually well-read, and a truly excellent thinker, thinks students are free to learn from the very beginning of schooling." Carlo's reply is: "I would make this statement even stronger by saying, like Holt, that living is learning and so schooling has nothing to do with learning--learning happens all the time even pre-birth and perhaps pre-conception. Here is how Holt phrases it: 'Living is learning. It is impossible to be alive and conscious (and some would say unconscious) without constantly learning things' (p. 157). Holt, J. (1989). *Learning All The Time: (how small children begin to read, write, count, and investigate the world, without being taught)*. Cambridge, MA: Da Capo Press."

After communicating with Ricci and viewing some of his you-tube videos, I've changed my mind about classroom activities gradually moving from teacher centered to students centered learning. Ricci said: "I think we need a break, not a transition. As Nietzsche writes, we need to philosophize with a hammer--tear down and start fresh. This is why I have dedicated my time to help people break free from the system and for those who choose to, to escape. I see myself primarily as a child advocate and I believe that children are the last acceptably oppressed group and this needs to be stopped immediately. If we want a more participatory democratic future we need to start with our child rearing practices. We cannot abuse and oppress children and expect that they will be kind, loving and compassionate as adults."

Ricci is profound and Nietzsche's quote is true and beautiful. I agree with the need for a fresh start when tearing down is badly needed. I probably earlier said that open inquiry and full freedom to learn might best begin at or after grade three. Regarding schooling, I now think agree that full freedom must begin when a student first steps into school, or preschool. Tearing down is now badly needed. The conservative obedience to authority types may not agree. It seems that more are noticing the value of being open and empathetic as well as kind, loving, and

compassionate. The rigid obedience to authority must be eradicated now and the eradication can be kindly, lovingly, and compassionately while all grading and student evaluation, except when requested, is eliminated. (see NOTES section for what some schools are doing to develop empathy.)

Perhaps I have not made clear that self directedness, as promoted by free schooling ,tends to permit greater degrees of other directedness. Indirectly, self-directedness will promote greater cooperativeness, kindness, and compassion to oneself and others. Some evidence of this is reported by Nipun Mehta, who said: On June 3rd (2009) an unusual oath was taken by more than 400 students graduating from Harvard Business School. At an unofficial ceremony the day before they received their MBAs, the students promised they would, among other things, "serve the greater good", "act with the utmost integrity" and guard against "decisions and behaviour that advance my own narrow ambitions, but harm the enterprise and the societies it serves." You may snigger. Yet with around half of this year's graduating class taking the pledge, Max Anderson, an MBA student himself, saw it as a triumph for a campaign that he launched only last month. He had hoped to get 100 of his classmates to sign up at best. The Economist, 6/4/09, elaborates on this.

During these open-ended inquiry sessions, as you will recall, the teacher gives information a student asks for, but rarely tells the student the answer to the discrepancy. The teacher rarely gives the correct answer since the process of relating concepts is more important than any particular concept which may explain a discrepancy. When a student asks a question designed to have the teacher agree or disagree with student's theory, the teacher might say something like: "You seem to be working on the theory. Can you think of any tests that you could do that would

test your theory?” Such a teacher statement helps the student think what is it they need to know, in order to know a more powerful answer to the discrepancy.

Students experienced in freedom to learn may be told answers to discrepancies when they are otherwise actively inquiring.

Another way to begin freeing students to learn is the way Dave Doane began his class mentioned in chapter 9.

The Einstein, Zen, whole brain way of functioning fits with Mihalyi Csikszentmihalyi's (*Flow*) statement: “There is no question that a playful like attitude is characteristic of creative individuals.” As was earlier said, we learn to play by playing. Humor is playful. Schools can facilitate that play and humor. Dr. Lee Berk of the center for immunology at Loma Linda School of Medicine shows that laughter can decrease stress hormones and boost the immune system. Robert Provine, neuroscientist notes: “The scientific record offers modest but growing support for the analgesic effects of laughter.” Remember the rat study which showed rats develop healthy brain cells when they are in control. (Fake laughing can generate real laughter. Try hard laughing for 30 seconds if you are open to the possibility of genuine laughter arising.)

Regarding matters beyond the physical, Pink reports Dr. Harold of Duke University said: “We are at the place you were 20 years ago when doctors were asked to take a sexual history.” They are only now beginning to ask patients about spiritual matters and many of patients are glad doctors are asking. Spiritual, is used here in the broad sense of allowing for secular spirituality (transphysical). What is the difference between metaphysical and spiritual?

The Einsteinian, Zen, whole brain approach to learning is learning to learn and is supported by what Dr. Jacob Needleman said: “We are born for meaning, not pleasure, unless it is

pleasure that is steeped in meaning.” Robert William Fogel, Nobel laureate economist, according to Daniel Pink calls this moment: “The fourth great awakening...The spiritual or immaterial inequity is now as great problem as material inequity, perhaps even greater.”

Kevin McKenna said: “Richard Rohr's book *Things Hidden, Scripture as Spirituality* includes: ‘So God said, Don't do it. Don't eat of the tree of knowledge of good and evil.’ What he's trying to keep us from is a lust for certitude, an undue need for explanation, resolution and answers.’

‘What I've learned is that not-knowing and often not even needing to know is a deeper way of knowing and a deeper form of compassion.’ So you see perhaps why false moral certitude is presented as the original sin. It clears the way for faith, hope and love, all three.”

What I am suggesting is the teacher be imaginative, allow himself or herself to take some risks, make mistakes, and intend for students to love learning, be openly inquiring, and promote student self direction. Undue need for certitude may be the original delusion (“sin”). Experimenting with a variety of ways is a way of finding which way works best for the individual teacher. The teacher needs to think for himself or herself before their students will think for themselves. When the teacher needs to prepare students for tests on what outside authorities think, pressure is on the teacher to do activities other than those the teacher thinks are best, learning will then not go as well, and minds may even be murdered.

A look at our society's present state of general awareness reveals an inordinately large number of white Americans are unaware that they are privileged as a result of their skin color. (Include men being unaware of their privileges resulting from maleness.) The race problem in this country will not move beyond “gradualism” with or without greater white awareness that people of color are not equally privileged. Awareness, attending to what is, will not as readily

occur without noticing that “receiving” is a stage preceding attending in the affective domain.

We must be open to receive before we allow ourselves to receive. What is received can then be given attention.

. Miller refers to Jack Welch, former head of General Electric saying: “You have to own a 100% of the talented business people in order to make effective use of them.” That too seems like a dead idea to Miller. Miller said: “When powerful people are in the grip of a flawed idea, it is obviously risky to take them on.”

Miller mentions that there are no dumb questions and he refers to Peter Drucker, who helped teach us when he said: “The dumbest questions are always the smartest questions because they get at the fundamentals

What Einstein, Zen and Miller are talking about is to find potentially dead ideas and then note what may replace them. Miller suggests corporations hire independent licensed heretics, something like a court jester, to do in talks with the big boss, what the court jester was able to say to the King. What the court jester could say could not reasonably be expected from people who were getting paid by the big boss. That is so because often what is needed to be said, the big boss won't want to hear because they may think one is accusing them of being wrong which they “know they are not.” Ridiculous is often how the boss sees those ideas that counter the boss' idea. If a subordinate tells the boss, the boss is wrong, the subordinate may find a need to withhold those thoughts if he wants a paycheck. Schools and universities need to hire licensed heretics and/or court jesters.

As was mentioned earlier, if the 6% of the trained world's population were educated they would not allow 13% of the world's population to be hungry or malnourished. Miller said: “Experts say we are likely to live through more change in the next 30 years than in the

previous 300; in this extraordinary moment, the biggest impediment to our collective coping is our imagination.” Einstein agrees. Our thinking does not match the change that is occurring and institutionalizing ideas and institutions may be what needs changing.

If we were more imaginative, Kurzweil’s idea that if we captured just one 10,000th of the sunlight that falls on earth, the world’s energy needs would be met. Miller reports that Kurzweil said: “Now that we can model, simulate and program biology just like we can a computer, it will be subject to the law of the accelerating returns, but doubling of capacity in less than a year. These technologies will be more than 1000 times more capable in a decade. More than a million times more capable in two decades. We are now adding three months every year to human life expectancy, but this will soon go into high gear. According to my models 15 years from now we’ll be adding more than a year each year to our remaining life expectancy. This is not a guarantee of living forever, but it does mean that the sands of time will start pouring instead of only pouring out.” What Kurzweil has been saying should help motivate us to be more imaginative more quickly. William Wordsworth said: “Not choice, but habit rules the unreflecting herd.”

Over the last two decades, more than 30,000 schools in the United States have eliminated recess to make more time for academics. From 1997 to 2003, children's time spent outdoors fell 50 percent, according to a study by Sandra Hofferth. Hofferth also found that the amount of time children spend in organized sports has doubled, and the number of minutes children devote each week to passive leisure, not including watching television, has increased from 30 minutes to more than three hours. On the flip side, decades of research has shown that play is crucial to physical, intellectual, and social-emotional development at all ages. This is

especially true of the purest form of play: the self-motivated, imaginative, independent kind, where we create our own games.

Tufts University psychologist David Elkind explores how we can build a new culture of play. Elkind quoted George Bernard Shaw who said: “We don't stop playing because we grow old; we grow old because we stop playing.” Elkind said: “Habits are a funny thing. We reach for them mindlessly, setting our brains on auto-pilot and relaxing into the unconscious comfort of familiar routine. In the ever-changing 21st century, even the word ‘habit’ carries a negative connotation. So it seems antithetical to talk about habits in the same context as creativity and innovation. But brain researchers have discovered that when we consciously develop new habits, we create parallel synaptic paths, and even entirely new brain cells, that can jump our trains of thought onto new, innovative tracks. So begins this thought-provoking New York Times article that explores the relationship between change, habits and innovation.”

Miller thinks more national control of school will give us more local control but I am not clear about how. National control, by extending school funding paid by the Federal government from approximately 6% to about 30% will help us do away with what Miller calls “local control.” Paradoxically Miller speaks about having more local control when there is more school nationalization. Today school districts have perhaps a \$5000. range of cost per pupil per year. Miller thinks some school systems in Europe could be models for us in terms of how we finance schools.

Miller mentions a 2008 report by McKinsey and Company which concluded “the quality of an education system cannot exceed the quality of its teachers.” Our local school boards as

well as our national mindset seems to not take that seriously. Schools and school boards still do not consider Dewey's idea of education as process.

Teachers in many places in the world receive much higher pay than teachers in the United States. Finland is given as an example of a school system that pays teachers extremely well.

Miller mentions that business executives will take the lead in change because of faith in pragmatism to bring about needed change in schools. I would need to know more of what he thinks before I would separate pragmatism of business leaders from the notion of the governmental-industrial-complex as running everything to suit big business. He may be implying that big business will see that big businesses won't exist unless we are more imaginative in our schools and society.

As Einstein mentioned, character was more important for scientists than knowledge. Miller mentions that it is character which ultimately matters in most elections of our leaders. At one time developing character was left mainly to families and Churches. Families and religions may now be seeing that a secular kind of character is equal to a divinely ordained type of character. That may be an idea worth considering as one of the Zen ideas is "the secular is holy and the holy is secular." Einstein would also agree with that.

Miller mentions the enlightened sense of self interest may help us notice dead ideas and move towards what he calls destined ideas. Zen masters and maybe even Einstein, may agree that the highest self interest would be a liberation from self interest so that cooperative selflessness would prevail over competitive, greedy, unaware selfishness.

Miller states: "The paradox of our time is that the blind spots of the planet's leading capitalist nation are now the biggest risk to the future of capitalism, and therefore to the well being not only of the United States but also of billions of people across the globe". He

suggests it is time we wake up and open our minds (as Zen practitioners and Einstein have been suggesting). Miller has an entire section of his book on the “the mind is a terrible thing to close.”

About mind opening Miller writes about a flaw of mind that is selective recall which leads us to remember only those experiences and facts that reinforce our assumptions. I plead guilty to often doing that. Miller said: “Thanks to biased evaluation, we jump to accept analysis for evidence that supports our view of things, while subjecting contrary evidence to grueling cross examination, dismissal, or rejection. Then there’s groupthink, that ineffable pressure to agree with everyone else in a close knit team.” Schools and universities often promote conformity.

Miller talks about moving from dead ideas to destined ideas. He refers to Freud’s notion of bringing up thoughts and feelings we have repressed from our unconscious. He said, as Einstein and Zen practitioners have said that we need to look where we are stuck because we have had emotional patterns we have developed since we were young. He also said we need to face up to the central vulnerability of our nature and that is a first step in admitting we need help.

Admitting we need help comes close to what I have said about a value of not knowing. If teachers and professors would provide conditions in classrooms such as freedom, responsive environment and discrepancies, the students could be aware of how they can get themselves stuck and how to get out of it when they are stuck.

You will recall Kurzweil suggests that our growth curves are moving toward a singularity which when reached, nothing will be known. Instead of fearing such an idea, that notion could be looked at as a challenge in that any best idea may be no permanent idea. The

“knowing nothing” may be similar to knowing everything temporarily that needs to be known at any given time. We only know in the present.

For Zen masters, and possibly Einstein, awareness of present experience leads one to do what needs doing at any given moment. Einstein never found a unity of gravity and quantum mechanics. Such a unity, if found, would probably be a fixed idea which may later be seen as dead. Physicists looking for a theory of everything may run into the same problem. There is a possibility that knowing nothing in an intellectual sense equals knowing everything. ( What needs to be known for happy, meaningful living?)

Pink’s idea that we are now in the age of conceptualization could be extended to what may soon be called the age of processing empty fullness. The stage is now and in Einstein’s terms, past, present, and future are not different. They too are one. This age is trans-intellectual. It is not only whole-brained. It is a whole everyone and everything’s mind. It is the universe of process of which we are a part, and like a hologram, each part reflects the whole. What is done to one part is done to the whole. What is done to the whole is done to each part.

As the Zen Master, Thich Nhat Hanh alluded to: when one person murders, each of us is also a murderer. When one person does something wonderfully awesome, each of us does something wonderfully awesome. We are connected to that degree.

Zen masters and perhaps Einstein came to notice what may replace fixed ideas is an indefinable “process.” Everything is in process. Saying that is almost saying nothing. Knowing that may be “knowing nothing.” To know that you know nothing may be a kind of knowing everything. Paying attention to what is happening as it is happening may replace

dead ideas. Obviously, much more needs to be said about what can't be said, and about what may be in our individual and collective unconscious. Let's take a look.

Einstein was speaking of the present moment (now) when one notices and accepts what one is noticing as one is noticing it. Eckhart Tolle suggests one has within them the means of accepting what is by paying attention. Attention to the now can be enhanced by asking oneself: "Can I be the space for this?" "This" being what one notices one is experiencing at that moment.

As one notices that one is not the thoughts or the feelings one is experiencing at any given moment, they move towards an aha! Rather, one is the awareness that thoughts and feelings are coming and going and, as they come and go, one is accepting what is there without the need to change what is here inside one. Whether one needs to imaginatively generate thoughts before one can do this kind of noticing I do not know. My guess is thoughts are not needed and the intellectualizing and conceiving may interfere with noticing what is. Now is all there is. Tomorrow never comes. Past is a present remembrance. It sounds so simple. Can you be the space for this? If you don't notice this now, be compassionate and notice what arises.

As Einstein said: "To raise new questions, new possibilities, to regard old problems from a new angle, requires creative imagination and marks real advance in science." To raise new questions etc. also marks a real advance living.

Science, and much of Einstein's thinking often dealt with hierarchies. In an attempt to put in a hierarchy that which is non hierarchical (Zen), it may be helpful to notice that open inquiry goes on with what one notices. One can notice without inquiring but one cannot inquire without noticing. Noticing arises before and after particular inquiries. The knowledge

and understandings and meanings that arise therefrom may only be a step to simply noticing what is.

Are there forms for creating forms? Are there algorithms for generating algorithms? Bruce Lipton recently reported that genes of a cell are like a program in a computer. Lipton reports that a cell can either provide growth or protection; not both. The more protection a cell gives one, the less growth it provides. Einstein and Zen practitioners imply that schools and universities have been imbalanced on the side of protection while neglecting growth. The result has been excessive training with stagnation and stultification of development.

Regarding learning to learn, taking more risk of growth and less protection of what we know (fixities), Einstein and Zen fall more on the side of growth than protection. Schools and universities could profitably take an example from Einstein and Zen practice by moving towards more growth than protection of fixities (more education than training).

When finding difficulty in striking an adequate balance, my tendency has been to somewhat overstate a case for the power of Zen ways of being. As was said, any statement about Zen is not Zen. Paradox noticeably grows as one attempts to express the practice of Zen. Paradoxically, understanding that one does not understand allows one to understand more by knowing less (being less certain).

Openness is a characteristic of Einstein and of Zen. Total openness is similar to emptiness. What is it that an empty sky cannot hold? Understanding that one does not understand alludes to the existence of mystery which Einstein cherished. Zen does not cherish mystery in that Zen cherishes nothing. Paradoxically “nothing” is quite mysterious.

Both Einstein and Zen practitioners appreciate being informed and illuminated. For Zen, the subject is not different from the predicate. Not knowing, not informing or not illuminating is profound knowing and great illumination.

As Pir Vilayat Inayat Khan said: (from *Awakening: A Sufi Experience*) “ All my life, I thought to myself, I have prided myself on what I thought were valid theories about the Universe – unmasking the hoax of superstitions, dogmas, and conditioned responses to life. But instead of dismissing all these constructs, I realized that they had acted as stepping-stones that led me to this ultimate breakthrough. Even though I had no more use for them, they remained there for my use, like a ladder propped against a wall.”

Wittgenstein asked his readers to kick over the ladder of what he said. May Gibran’s idea be noticed when he said: “The astronomer may speak to you of his understanding of space, but he cannot give you his understanding. The musician may sing to you of the rhythm which is in all space, but he cannot give you the ear which arrests the rhythm nor the voice that echoes it. And he who is versed in the science of numbers can tell of the regions of weight and measure, but he cannot conduct you thither. For the vision of one man lends not its wings to another man.”

The process of gaining insight and meaning is a process which cannot be fully seen by looking at an instance of the process. The way is process and that may be one reason why the way that can be said is not the way since the process is more than the sum of the parts of the process. The arrangement of the parts cannot be seen apart from the whole of the process. When considering, for instance, the whole of physics, Feynman said: "Physics is like sex. Sure, it may give some practical results, but that's not why we do it."

As the physicist Fritjof Capra said: "In Indian philosophy, the main terms used by Hindus and Buddhists have dynamic connotations. The word Brahman is derived from the Sanskrit root brih – to grow- and thus suggests a reality which is dynamic and alive. The Upanishads refer to Brahman as ‘this unformed, immortal, moving’, thus associating it with motion even though it transcends all forms.’ The Rig Veda uses another term to express the dynamic character of the universe, the term Rita. This word comes from the root ri- to move. In its phenomenal aspect, the cosmic One is thus intrinsically dynamic, and the apprehension of its dynamic nature is basic to all schools of Eastern mysticism. They all emphasize that the universe has to be grasped dynamically, as it moves, vibrates and dances."

As Mann says in *Virtues of Distraction*: ...”but if you are having attention problems, the best way to deal with it is by admitting it and then saying, ‘From now on, I’m gonna be in the moment and more cognizant.’”

Since the early Greeks separated philosophy from poetry, Western thinkers have been influenced to become excessively rational (less holistic) in the pursuit of truth. Aesthetics and ethics have been given a lower place in philosophy because one cannot be as sure of what is good or beautiful as we can be sure that two plus two equals four.

Einstein’s view is somewhat different and more holistic than the Western view as evinced by what he said: “The pursuit of truth and beauty is a sphere of activity in which we are permitted to remain children all our lives.” I interpret his statement as positive since pursuing truth and beauty was very important to him. When he said: “All of science, when measured against reality, is primitive and childlike”, paradoxically, may have been said because of our acquired need to be excessively certain (an original sin according to Richard Rohr).

Excessive certainty relates to a truth being true not only now, but always. Einstein knew there was no difference between “always” and “now” yet our need for certainty finds it necessary to make such a distinction. What I am saying is speculative and therefore unscientific. Being unscientific about being permitted to be a child all our lives may take such behavior out of the category of being primitive and childlike as Einstein used the term when referring to modern science. When one gives oneself permission to be a child all one's life one may simultaneously be more holistic while being less certain.

As Kenneth Patchen said: “Think enough and you won't know anything.” Paradoxically, some Buddhists cherish that notion in the sense of noticing one's thinking is limited may help one know more by not knowing concepts but rather, knowing directly that to which the concept is referring. The late Zen master, Shunryu Suzuki, in *Zen Mind Beginners Mind*, elaborates on this practice.

While Einstein had moved a long way toward Zen living, he, as almost everyone else, had a way to go. The way to go that can be said is not the way. The way is in you and not somewhere else. As has been said, some nonsense is involved when talking about Zen. If you notice yourself noticing, while you are noticing, you'll also notice there is nothing else to notice. The present is all there. Your present experience may be a present remembrance or a present anticipation or a feeling you want or don't want. The way to avoid suffering is to just notice what is as you are experiencing. Begley reports that research shows: “Altruism and its cousin, generosity, seem to reflect less on who you are than what you see.”

I don't recall the source or the author who mentioned that when one understands, one forgives. Such an understanding relates to understanding that one is one with everyone and

everything. One also may forgive when one understands that one does not understand. There is an aspect of meta-understanding operating when forgiving some transgressions as being more important than needing a reason for forgiving. Forgiving is a kind of giving. The highest understanding I notice occurs when one understands, rather than seeks to be understood. Such a person also will bring compassion and love where there is hatred; and will bring hope where there is despair: will bring the light where there is darkness, and will bring joy where there is sadness.

Such a forgiving person understands he or she does not understand and/or understands he or she is one with everyone and everything. Such an understander will also console, rather than seek to be consoled. They will pardon - - forgive --where there is injury--- Furthermore, they will give rather than primarily receive; they will be somewhat content with the finding/meaning they now have rather than continually feverishly seek, and they will each moment die from being their old self and emerge as a new self. They will see that everyone and everything is impermanent. The impermanence changes what is every second or minute. That is why it is difficult to know anything and why not knowing is often cherished.

A person with such an understanding also realizes they are passing by this way but once. They would further understand than that any good they could do, or any kindness they may show, to human being, they would do it now. They would not defer, nor neglect it, for they understand they will not pass this way again.

After reading much about Einstein, I conclude that he, while having imperfections, was noticeably more understanding in the above mentioned sense than most. May we also conclude that understanding as mentioned above would be the epitome of being educated.

Francis of Assisi, and perhaps William Penn among others, achieved that level of understanding. It is posited that their other directedness arose from their self directedness. Their understanding arose because they were free.

A recurring theme has been that we often make better decisions when we notice what is happening as it is happening. Growth of self direction, love of learning, and at ease living arise from one's decisions. Most of our training has told us to avoid observing the way we observe as we are observing since infinite regress will make us uncertain and indecisive. We have been trained to be excessively certain. (A secular mistake so serious that it may be considered a secular "sin," perhaps the original one as Rhor has said.)

Uncertainty and indecisiveness may now help us in an age of unusual rapidity of change. As was said by Richard Rohr, our original failure may be our desire for certainty. Removing ourselves from this failure may require greater acceptance of uncertainty/ greater tentativeness. This can only occur in the present.

Everyone makes mistakes. Fewer mistakes may be made if mistakes are made as a result of some potentially growthful risk-taking rather than mistakes made from blindly following an obedience to authority mindset into which one was earlier programmed. Einstein and Zen practitioners are often mindful of their mindfulness, part of which is their mindfulness of their uncertainty. We know our imaginations provide possibilities rather than certainties. Thinking about one's thinking (open awareness of one's present experience) can help one integrate more parts of one's brain to make better decisions.

Noticing one's tentativeness/uncertainty may help one come to know more than one knows when one is highly certain. While confidence is comforting, Lehrer states brain research shows: "this desire to always be right is a dangerous side effect of having so many competing

brain regions.” Noticing competing brain regions can help us become more insecure, but paradoxically, this insecurity can help us become more secure when we notice what is happening, including noticing what is happening in our minds while we are minding.

We have not, on a wide scale, considered that excessive training may be detrimental to developing self direction/ educating. In mid 2009, we are near 10% unemployment; the highest in 26 years. This unemployment now results more from a poor economy rather than from intellectronics, artificial intelligence, and robotics. Artificial intelligence and robotics, however, will soon be doing away with many jobs at all levels yet schools and universities do little to help students accept themselves as they are with their present abilities and limitations.

We are moving toward an age when we will be free to do the things that are more fully human. Being compassionate to our fellow man and to ourselves is strongly advocated by both Einstein and Zen practitioners. Through Einsteinian/Zen type un-coerced schooling we may accomplish this by learning to share and accept that which cannot be changed while changing societal injustices that are changeable. Brain research shows that altruism can be more rewarding in the long run than selfishness and competitiveness. If more politicians, teachers and professors modeled compassionate sharing, openness, self-direction, and tentativeness, we may become more highly educated.

Tolle commented: “We are not our thoughts. The very fact that we can objectively observe our thinking, suggests that the constant and often negative dialogue in our heads is separate

from who we really are. Realizing this can bring us closer to fearlessness and peace.”

There is nothing you are supposed to do at any “now.” Notice that right now there is nothing to know, nothing to attain, and nothing to realize. When one notices what is in a relaxed way, the more one may notice and the more freeing the noticing can be. When one is hungry one will eat and when one is tired one will sleep.

You can notice that the universe will not satisfy your desires as you also notice that the universe is not a threat. If you’re fearful, remember the fear is in you and not in the thing feared.

Everyone, including Einstein, seems to need noticing (while simultaneously not needing more noticing). Zen appears to be inexhaustible. A desire for wisdom, enlightenment, awakening, openness, inquiry, learning, and or anything else, is at first, second, and third glances, the problem. When one notices, the implication is also noticing that desire is the problem. If you notice a way out of that problem now, what could be said about “it” would not be “it.” Should you desire something now, try placing that desire on hold for one minute and notice what happens. Einstein noticed a violin, a table, a bowl of fruit, and a chair was all he needed. He slept when tired and ate when hungry in his later life.

As you continue to notice your noticing, Zen practitioners often experience near continual gratitude for just being alive. When paying attention to your “now”, your present experience, you can see a shift in consciousness from attempting to avoid certain thoughts or feelings to accepting what you are experiencing while making changes you think need to be made. You can also notice that now is continuous and ongoing. It can continue to be fascinating and it permits you to allow things to happen rather than make things happen. You do not need the sound of a trumpet to notice the magnificence of what is happening at the only time it can

happen; now.

NOTES

1. Smith, David Geoffrey, Pedagon, Bragg Creek, Alberta: Maky Press, 1994.

The following quotes elaborate on ideas earlier presented.

2. Rocky Kolb, Professor of Astronomy at the University of Chicago said:

“As a cosmologist, I take away two lessons from Einstein’s first foray into cosmology:

It’s okay to be wrong.

Listen to what equations are telling you.

Simpler is usually better.

Don’t be afraid to make bold predictions -- -- perhaps Einstein was too conservative when he failed to predict the expansion of the universe.

Be unprincipled. Principles are dangerous things. Einstein was led astray by Mach’s principle. My friend and fellow cosmologist Andrei Linde always says that even people without ideas can have principles.

Sometimes you can be right for the wrong reasons.

Admit when you’re wrong.”

3. John O’Donahue said:

“When you begin to sense that your imagination is the place where you are most divine, you feel called to clean out of your mind all the worn and shabby furniture of thought. You wish to

refurbish yourself with living thought so that you can begin to see as Meister Eckhart says: Thoughts are our inner senses. When the inner senses are dull and blurred, you can see nothing in or of yourself; you become a respectable prisoner of received images. Now you realise that 'eternal vigilance is the price of liberty' and you undertake the difficult but beautiful path to freedom. On this journey, you begin to see how the sides of your heart that seemed awkward, contradictory and uneven are the places where the treasure lies hidden. You begin to become true to yourself. And as Shakespeare says in Hamlet: To thine own self be true, then as surely as night follows day, thou canst to no man be false.”

“The journey shows you that from this inner dedication you can reconstruct your own values and action. You develop from your own self-compassion a great compassion for others. You are no longer caught in the false game of judgment, comparison and assumption. More naked now than ever, you begin to feel truly alive. You begin to trust the music of your own soul; you have inherited treasure that no one will ever be able to take from you.”

“At the deepest level, this adventure of growth is in fact a transfigurative conversation with your own death. And when the time comes for you to leave, the view from your death bed will show a life of growth that gladdens the heart and takes away all fear.”

4. Nipun Mehta’s charity focus.com presents the following ideas which give support to what is said about Einstein and Zen: He quotes Daniel Goldman: “Simply paying attention tates quotes Daniel Goldman: “Simply paying attention allows us to build an emotional connection. Lacking attention, empathy hasn't a chance. : Daniel Goleman, psychologist and award-winning author of "Emotional Intelligence"(EI) and

other books on EI, challenges traditional measures of intelligence as a predictor of life success. In this 20 minute TED Talk video, he asks why we aren't more compassionate more of the time. Sharing the results of psychological experiments, and using personal anecdotes, he explains how we are all born with the capacity for empathy -- but we sometimes choose to ignore it.”

“The more tranquil a man becomes, the greater is his success, his influence, his power for good. Calmness of mind is one of the beautiful jewels of wisdom.” --James Allen

"OK, everyone! I need you to sit quietly! Let's all sit crisscross applesauce!" says their guidance counselor, Jennifer Hegerty. Gradually the children settle down and begin to focus on Hergerty's lesson for the day -- the second lesson in the Second Step Violence Prevention curriculum. For the next 20 weeks, these children learn to use relaxation exercises, effective communication techniques, and listening skills to handle their emotions and make good choices. Developed by the Committee for Children -- a nonprofit in Seattle -- Second Step is now in its 21st year and has been taught to more than nine million children in North America. "It's great when teachers can practice things with the kids," she says. "There's a big impact when kids see a teacher grappling with anger and using a calming down strategy.”

The Buddha said: “As irrigators lead water where they want, as archers make their arrows straight, as carpenters carve wood, the wise shape their minds.”

“At the deepest level, the creative process and the healing process arise from a single source. When you are an artist, you are a healer; a wordless trust of the same mystery is the

foundation of your work and its integrity.” --Rachel Naomi

From Nipun Mehta; Barry Schwartz, Incentives are not enough (*Practical Wisdom*)

When you incentivize everything, you de-moralize it. You take the moral dimensions out of it.

Arguably, in the olden days, bankers wanted to make money, but they also wanted to serve clients and communities. What that means was that there was a certain way to proceed if you were a banker to make sure that people were not taking on more debt than they could handle, that people were putting away enough money so that when they retired they would be able to pay their mortgage and buy food and clothing. ... Nobody thinks that way anymore.

When you rely on incentives, you undermine virtues. Then when you discover that you actually need people who want to do the right thing, those people don't exist because you've crushed anyone's desire to do the right thing with all these incentives. And if you bring in a new set of people to replace them -- virtuous, moral people who want to do the right thing -- and they're subjected to the same set of incentives, they're going to become just like the people they replaced.

I'm not talking about getting rid of incentives; people have to make a living. But people need to understand that rules and incentives aren't enough.... The more rules and incentives you have, the less wisdom you will have. There needs to be room left on the one hand to nurture in people the desire to do the right thing and on the other hand to give them the tools so that they'll know

what the right thing is. This incredible pressure to increase payoffs is an obstacle to doing the right thing. You will never be able to create a system of incentives that rewards people for doing the right thing. The system of incentives may start out that way, but very quickly clever people will find ways to ... game it.

I think the first step toward achieving [a solution] is appreciating that the tools we currently use are not sufficient.... The step after that is to identify and acknowledge the existence of moral exemplars – if you like, moral heroes -- that the people you're training can aspire to emulate. And they don't have to be people who do extraordinary things. There are people who do small things that count as moral heroes. And then giving the people you're training the room both to improvise and to have room in their lives for wanting to do the right thing and not just the profitable thing. Nipun Mehta reported: “As health-care costs skyrocket, a down-to-earth approach to healing is emerging, complementing high-tech medicine with high-touch arts. The approach is based on the assumption that incorporating music, visual art, writing and performance into clinical care can increase feelings of well-being and even improve health -- an assumption that medical researchers are beginning to recognize the need to test with evidence-based studies. Integrating the arts into health care is in vogue, said Leonard Shlain, a laparoscopic surgeon in San Francisco, ‘because it works.’ And at New York University Medical Center, using art to reduce stress has become a priority, according to Marianne Hardart, director of creative arts therapies. ‘There's not anyone it doesn't work with,” she said,

including adults, adolescents and younger children.””

5..

From charityfocus.com: An example of imaginative behavior. German drivers deciding for themselves what will secure or endanger their freedom appears below.

“A Green Light for Freedom and Common Sense  
To Slow Drivers, German Town Drops Traffic Signals and Lane Markers  
By Craig Whitlock  
Washington Post Foreign Service  
Monday, December 24, 2007; A09:”

BOHMTE, [Germany](#) – “Like countless other communities, this west German town lived for years with a miserable traffic problem. Each day, thousands of cars and big trucks barreled along the two-lane main street, forcing pedestrians and cyclists to scamper for their lives.”

“The usual remedies -- from safety crossings to speed traps -- did no good. So the citizens of Bohmte decided to take a big risk. Since September, they've been tearing up the sidewalks, removing curbs and erasing street markers as part of a radical plan to abandon nearly all traffic regulations and force people to rely on common sense and courtesy instead.”

“This contrarian approach to traffic management, known as shared space, is gaining a foothold in Europe. Towns in the Netherlands, Denmark, [Britain](#) and Belgium have tossed out their traffic lights and stop signs in a bid to reclaim their streets for everyone.”

“The assumption is that drivers are accustomed to owning the road and rarely pay attention

to speed limits or caution signs anyway. Removing traffic lights and erasing lane markers, the thinking goes, will cause drivers to get nervous and slow down.”

"Generally speaking, what we want is for people to be confused," said Willi Ladner, a deputy mayor in Bohmte. "When they're confused, they'll be more alert and drive more carefully.”

## 6. Beyond The Mystics

“Roger Penrose, a mathematical physicist at Oxford University, believes that if a "theory of everything" is ever developed in physics to explain all the known phenomena in the universe, it should at least partially account for consciousness.”

“Penrose also believes that quantum mechanics, the rules governing the physical world at the subatomic level, might play an important role in consciousness.”

“It wasn't that long ago that the study of consciousness was considered to be too abstract, too subjective or too difficult to study scientifically. But in recent years, it has emerged as one of the hottest new fields in biology, similar to string theory in physics or the search for extraterrestrial life in astronomy.”

“No longer the sole purview of philosophers and mystics, consciousness is now attracting the attention of scientists from across a variety of different fields, each, it seems, with their own theories about what consciousness is and how it arises from the brain.”

“In many religions, consciousness is closely tied to the ancient notion of the soul, the idea that in each of us, there exists an immaterial essence that survives death and perhaps even predates birth. It was believed that the soul was what allowed us to think and feel, remember and reason.”

“Our personality, our individuality and our humanity were all believed to originate from the soul.”

“Nowadays, these things are generally attributed to physical processes in the brain, but exactly how chemical and electrical signals between trillions of brain cells called neurons are transformed into thoughts, emotions and a sense of self is still unknown.”

"Almost everyone agrees that there will be very strong correlations between what's in the brain and consciousness," says David Chalmers, a philosophy professor and Director of the Center for Consciousness at the Australian National University. "The question is what kind of explanation that will give you. We want more than correlation, we want explanation -- how and why do brain process give rise to consciousness? That's the big mystery."

Chalmers is best known for distinguishing between the 'easy' problems of consciousness and the 'hard' problem.

The easy problems are those that deal with functions and behaviors associated with consciousness and include questions such as these: How does perception occur? How does the brain bind different kinds of sensory information together to produce the illusion of a seamless experience?

"Those are what I call the easy problems, not because they're trivial, but because they fall within the standard methods of the cognitive sciences," Chalmers says.

The hard problem for Chalmers is that of subjective experience.

"You have a different kind of experience -- a different quality of experience -- when you see red, when you see green, when you hear middle C, when you taste

chocolate," Chalmers told Live Science. "Whenever you're conscious, whenever you have a subjective experience, it feels like something."

According to Chalmers, the subjective nature of consciousness prevents it from being explained in terms of simpler components, a method used to great success in other areas of science. He believes that unlike most of the physical world, which can be broken down into individual atoms, or organisms, which can be understood in terms of cells, consciousness is an irreducible aspect of the universe, like space and time and mass.

"Those things in a way didn't need to evolve," said Chalmers. "They were part of the fundamental furniture of the world all along."

"Instead of trying to reduce consciousness to something else, Chalmers believes consciousness should simply be taken for granted, the way that space and time and mass are in physics. According to this view, a theory of consciousness would not explain what consciousness is or how it arose; instead, it would try to explain the relationship between consciousness and everything else in the world."

From Nipun Mehta:

## 7. Karlrklund.net

Let's look at a couple of particular implications. Besides the kinds of technical problems that are solved by replacing the Law of Survival of the Fittest with the Law of the Survival of the Just-Barely-Fit, there are important extensions to human behavior.

Fundamental Darwinism requires that we treat everyone as our competitor, that brother's hand shall be raised against brother in bloody warfare for all eternity. This is an obvious requirement of the 'Law of Survival of the Fittest', because if we take pity on a weaker or less ruthless individual it will supposedly do harm to our species.

The Law of Survival of The Just-Barely-Fit, however, makes altruism a virtue.

That species which is cooperative, which has compassion for the weak and disabled and helps them to survive, will attain the greatest degree of variation of characteristics possible in a particular environment and will thus have a better chance of survival **as a species**. Species survival does not call for intra-species competition, it calls for the maximum degree of intra-species cooperation that can be managed.

In some species that isn't a primary mode of operation, but cooperation is inherent in human behavior. Our evolutionary advantage over the other primates is that we communicate with one another using abstract mouth-noises as well as the body-language that is the common primate inheritance. This allows us to cooperate at a much more subtle level than the other primates can, in that subtle and complex behavior we call culture.

Not competition but cooperation is the behavior blessed by evolution, for the human species if not for all more complex animals.

Furthermore, to the extent that the base of cooperative activity that generates culture is tolerant of variation it is more likely to survive. The cultures that have survived are those that can cope with change, can live with the insecurity that

comes along with creativity. Creativity produces variation, and variation increases survivability. All else equal, that culture which provides the most opportunity for creativity is the culture which is most likely to be the base for the future...

Nipun Mehta reports:

[Educationfinder.net](http://Educationfinder.net) is an all new way to help families find the education

"It's not very helpful," said Susan Greenfield, a professor of pharmacology at Oxford University. "You can't do very much with it," Greenfield points out. "It's the last resort, because what can you possibly do with that idea? You can't prove it or disprove it, and you can't test it. It doesn't offer an explanation, or any enlightenment, or any answers about why people feel the way they feel."

"Greenfield's own theory of consciousness is influenced by her experience working with drugs and mental diseases. Unlike some other scientists -- most notably the late Francis Crick, co-discoverer of the structure of DNA, and his colleague Christof Koch, a professor of computation and neural systems at Caltech -- who believed that different aspects of consciousness like visual awareness are encoded by specific neurons, Greenfield thinks that consciousness involves large groups of nonspecialized neurons scattered throughout the brain."

"Important for Greenfield's theory is a distinction between 'consciousness' and 'mind,' terms that she says many of her colleagues use interchangeably, but which she believes are two entirely different concepts."

"You talk about losing your mind or blowing your mind or being out of your mind, but those things don't necessarily entail a loss of consciousness," Greenfield said in a telephone interview. "Similarly, when you lose your consciousness, when you go to sleep at night or when you're anesthetized, you don't really think that you're really going to be losing your mind."

7. from Education Revolution:

Forwarded to AERO, a former staff member, Alan Muskat in Asheville, NC.,said:

The Jackson County school board voted 5-0 Monday night to terminate the contract of a Cullowhee Valley Elementary School teacher who refused to administer a No Child Left Behind standardized test to his students with disabilities.

Doug Ward was suspended after he announced in a May 12 email to school officials that he would not be giving his students — some of whom operate far below grade level — the NCEXTEND1 test. Ward said the test “does not provide an opportunity for students to show whether they have made progress during the school year.”

School Board Chairman Ken Henke said the board had little choice in making their decision.

“The situation, whether it was this or any one, is that we give a person

ample opportunity to make a decision and to change their ways, and if they still do not wish to go in that direction, we don't have any choice," he said.

"Henke said a charge of insubordination, like that levied on Ward, almost always carries with it an automatic contract termination."

"The chairman said the quality of Ward's teaching was not a factor in the decision, and in fact, "everything was fine there — but we're still required like anybody else to follow the rules." Ward said though he didn't agree with the board's decision, it didn't surprise him."

"That was the worst-case scenario, but in thinking it through I figured likely that would be the consequence," he said. "The last thing they want is a bunch of teachers to refuse the test. They had to make an example out of me."

"The final request Ward made of the school board was that it allow him to come back for a day to say goodbye to his students. That was denied, and his suspension remains extended through the end of the school year."

"The teacher says he doesn't regret his actions. "It was the right thing

to do, and it worked out how it was supposed to. Whatever's supposed to happen next will," he said. Support for Ward has poured in from around the region and the country."

"It really struck a nerve as far as testing and how stressful it's been for the kids and teachers," he said. Although he's just one teacher, Ward hopes others will learn from the stand he took.

"Hopefully people will look at it and realize the whole absurdity of that specific test and standardized testing in general as our primary assessment tool for education," he said. "I hope those people will stay with that and work together to make a change in the system. Another goal from the experience is that more attention will be focused on integrating students with disabilities into the overall school experience."

"Ward, who just received his master's degree in special education for students with severe disabilities, isn't sure what his next move will be. He's looking into several career options, including working to help formulate education policy."

"Editor's note: An excerpt from Doug Ward's letter to the School

9. Board, read May 26, 2008:

It is my opinion that punishing me for refusing to give the NCEXTEND1 is equivalent to punishing a 3rd grade teacher for refusing to give their students a 9th grade Algebra test for their math EOG.”

“However, I understand that the superintendent and the school board have laws which they follow, and I understand why I have been suspended and why my contract will not likely be renewed. I ask only that my 23 day suspension be reduced by a whole or even half day, so that I might get a chance to say farewell to all the wonderful students and faculty at CVS with which I have had the honor and the blessing to teach and to learn from!”

**(From AERO) Starting a New Democratic Alternative**

**School in New York City:**

Earlier we reported briefly that we are working with two groups trying to start a new democratic alternative in New York City. We have already helped start Brooklyn Free School which is just finishing its fourth year. But Brooklyn Free School now has 65 children on its waiting list. There is need for more democratic schools and programs in New York City! One of the new groups, organized around the

vision of a 16 year old homeschooler, has had several organizational meetings. On Sunday we had a "demonstration day" to see how the center might work. It was on Father's day, so the numbers were limited.

We started out very slowly, but people did trickle in. The people who came had a very nice day, but we still need to reach the critical mass needed to move forward with a new school or resource center.

We set up a ping pong table and I taught several kids. Later some of the adults also played.

With the first two 11 year olds who arrived I did what I call "organic curriculum" or a "question class." In that exercise I ask the students to brainstorm any question that comes to their mind, nothing censored. We then write them down and rate them as a group to see what we want to discuss. The initial brainstorming took about 10 minutes.

Why do people have different opinions?

We rated these and discussed some of these questions for a while. Then we played more table tennis. The four kids

played with each other. The adults talked about philosophy.

One parent and child talked about a visit they had made to Highland School in West Virginia, a day and boarding democratic school. Walter and Pat talked about their resent visit to Sudbury Valley School.

Later we talked about the idea of the judicial committee and of teachers offering classes (different democratic schools have different approaches on these).

If you are interested in getting involved with these groups, contact the AERO office or reply to this e-newsletter. This is just one of the projects AERO is working on to help people start new alternatives.

**From [www.educationrev](http://www.educationrev) reports that Sharon Salzberg said:**

“A friend of mine, at the end of a retreat, offered a provocative reflection that intrigued and inspired me. After looking intensively at her inner experience for nine days of meditation and seeing many of her life choices in a brand new light, she commented, "If you really want to be a rebel, practice kindness."

“I think she was absolutely right about kindness and rebellion.”

“The world may tell us to grab as much as we want, and we might think that the audacity of rebelliousness is to grab even more with impunity, but how about being really radical and questioning how much we need? Conventional wisdom may be that retribution displays strength and can summarily bring an end to conflicts, but how about taking a leap and challenging ourselves to a whole new meaning of resolution based on mutuality and caring? The easy way may be to turn away and distract ourselves from the distress and suffering of others, but how about being daring enough to pay attention? Our conditioning may tell us we don't need anybody, but how about taking a real look at life and noticing that we are all entwined in a fabric of interdependence, then being willing to risk acting accordingly?”

“Although in current times there are some common connotations of morality as expressing fear of life or prudishness, in fact a commitment to ethics is a commitment to living life in the most free, most loving, most expansive sense.[...]”

“As the philosopher George Santayana said, "Morality is the desire to lessen suffering in the world." Living in a way that doesn't perpetuate hurting ourselves or hurting another is considered to be an expression both of great power and great compassion.[...] There is no way to lash out at someone physically or verbally, to belittle their achievements, to exploit them in some way, to consider them unworthy of hearing the truth, and emerge undamaged ourselves. We are capable of so much more, and we dishonor that potential when we don't live with integrity.”

For more about free and Alternative schools read: [Journal of Unlearning and Alternative](#)

Schooling, Carlo Ricci, [www.nipissingu.ca/jual](http://www.nipissingu.ca/jual)

The Alternative Education Resource Organization (AERO) was founded in 1989 by Jerry Mintz. AERO is a branch of the School of Living, a non-profit organization founded in 1934 by Ralph Borsodi. AERO's goal is to advance student-driven, learner-centered approaches to education. AERO is considered by many to be the primary hub of communications and support for educational alternatives around the world. Education Alternatives include, but are not limited to, Montessori, Waldorf (Steiner) Choice, Democratic, Homeschool, Open, Charter, Free, Sudbury, Holistic, Virtual, Magnet, Early Childhood, Reggio Emilia, Indigo, Krishnamurti, Quaker, Libertarian, Independent, Progressive, Community, Cooperative, and Unschooling. One of AERO's areas of expertise is democratic process and democratic education, but equally important is the networking of all forms of educational alternatives. It is through our work and mission that we hope to create an education revolution.

10.

From BGSU Strategic Directives: Passion for Inquiry:

“Produce high quality scholarship and creative achievements.”

As noted in the BGSU Academic Plan, faculty, staff, student research and creative endeavors fuel the passion for inquiry across the learning community. Inquiry is the backbone of academic disciplines, a powerful vehicle for student learning, and a bridge between the University and society. We must continue to provide an environment that is conducive to promotion of inquiry for all members of the community at all stages of their lives.”

11.

One example of one kind movement toward Einsteinian/Zen Mind opening:

Empathy in schools from NY Times 4/5/09.

....The emphasis on empathy here, Scarsdale, N.Y., and in schools nationwide is the latest front in a decade-long campaign against bullying and violence. Many urban districts have found empathy workshops and curriculums help curb fighting and other misbehavior. In Scarsdale, a wealthy, high-performing district with few discipline problems to start with, educators see the lessons as grooming children to be better citizens and leaders by making them think twice before engaging in the name-calling, gossip and other forms of social humiliation that usually go unpunished.

“As a school, we’ve done a lot of work with human rights,” said Michael McDermott, the the academic mission of our schools.” middle school principal.

“But you can’t have kids saving Darfur and isolating a peer in the lunchroom. It all has to go together.”

Deborah Kasak, executive director of the [National Forum to Accelerate Middle-Grades Reform](#), said that teaching empathy can seem “artificial or hokey” to some students, but over time can foster a school culture that encourages learning over social distractions. “I don’t know if you can teach everybody to be empathetic,” she acknowledged, “but you can raise

awareness.”

Empathy lessons are spreading everywhere amid concerns over the pressure on students from high-stakes tests and a race to college that starts in kindergarten. The [Character Education Partnership](#), a nonprofit group in Washington, said 18 states — including New York, Florida, Illinois, Nebraska and California — require programs to foster core values such as empathy, respect, responsibility and integrity.

This year, Los Angeles is spending nearly \$1 million on a nationally known program for its 147 middle schools, called [Second Step: Student Success Through Prevention](#), which teaches empathy, impulse control, anger management and problem solving. In Seattle, seven public elementary schools are using a Canadian-based program, [Roots of Empathy](#), in which a mother and her baby go into the classroom to explore questions like “What makes you cry?”

Within the charter network [KIPP, \(Knowledge Is Power Program\)](#) some schools are focusing more on empathy, with lessons about the Holocaust, role-playing and a “values jingle” sung to the tune of “Jingle Bells.”

And on Long Island, Weber Middle School in Port Washington inducted 300 students — nearly one-quarter of the school — into the Weber Pride club this year as reward for gestures like sitting with a new girl at lunch or helping a panicked classmate on the rock climbing wall.

At Public School 114 in the South Bronx, where [David A. Levine](#), author of “Teaching Empathy,” has been running workshops since 2006, the principal, Olivia Francis-Webber said that the number of fights had dropped to fewer than three a month — from one to three a week — and disciplinary referrals were down to about five a month from nearly 20.

Before, she said, teachers would “immediately admonish the child for bad behavior and send them to the office,” but since the empathy training began, they more often are “sitting down with students and finding out what’s wrong.”

## APPENDIX

## Brooklyn Free School MISSION STATEMENT

The Brooklyn Free School (BFS) places the highest emphasis on the personal development of each student and seeks to minimize, or if possible eliminate completely, undue influence, pressure and stress that accrue from expectations on students to acquire the accepted wisdom of present day society or meet arbitrary standards, so that each child can become an independent learner and thinker.

BFS is a true democratic school for children of all ages. Each child and staff member will have an equal voice in major decisions (and minor ones) affecting the day-to-day running of the school.

BFS believes that all children are natural learners and they are fully supported to pursue any interest they have, in the manner they choose, at their own pace, and for as long as they want to, as long as they do not restrict any other person's right to do the same.

Admissions to the school are not based on ethnicity, income level or geographic location.

The school takes full advantage of the tremendous diversity of individuals, businesses, organizations, and communities that the City of New York, and the entire Metro area, has to offer to build on students' interests.

No one (students, staff, or visitors) is discouraged from offering a class, event, or activity to the school, provided that it is non-compulsory.

The school will spread the news about the effectiveness of democratic/free schooling in the New York area to promote the growth of non-coercive education throughout the country and

the world.

#### Brooklyn Free School's Non Discrimination Statement:

The Brooklyn Free School does not discriminate on the basis of race, color, national or ethnic origin, religion, disability, sexual orientation, or gender identification in the administration of its educational policy, scholarship and loan programs, admissions and other school-administered programs. The Brooklyn Free School (917) 715-7157  
120 16th Street, Brooklyn  
[contact@brooklynfreeschool.org](mailto:contact@brooklynfreeschool.org)

#### ABOUT THE BROOKLYN FREE SCHOOL...

“A grassroots movement formed in the summer and early fall of 2003 with the goal of offering a true educational alternative to the traditional orthodoxy of education now dominant in most public and private schools in this city, the Brooklyn Free School has now sprouted wings and has been up and running since September 2004. The community is composed entirely of parents, students, educators and others who believe that freedom and democracy are not just textbook concepts, but a way of living and learning - for our children as well as ourselves. The Brooklyn Free School is dedicated to the belief that all students must be free to develop naturally as human beings in a non-coercive educational environment and empowered to make decisions affecting their everyday lives and that of their community.

The Brooklyn Free School is a democratic, free school founded on the principles begun with Summerhill School in 1921, and adopted in one form or another by many schools in the late

1960's in the United States such as The Sudbury Valley School in Framingham, MA, and the Albany Free School in Albany, NY. Both of these schools are successful proponents of the democratic/free school model and the BFS incorporates major aspects of each these schools in developing a unique culture for the NYC area.

The school has accepted students aged 5 through 15, and will serve students up to 18 years of age by 2007. Students are not segregated by age. There is no set curriculum except the establishment of an all-inclusive democratic system that runs the school, and the communication of that system to all members of the school. The communication of the twin philosophical underpinnings of the school, including the democratic system stated above, and the understanding that students are free to pursue their individual interests for however long they want and in whatever manner they choose, thereby placing the responsibility for learning on the students, also constitutes the curriculum of the school. There are no compulsory grades, assessments or homework. The students are in charge of their own learning and progress and are able to adequately assess themselves and perform any additional work or learning outside of the school that they want to in line with their interests.

The school strives to provide a multi-disciplinary, reality-based/project-based and applied learning approach to further the student's understanding and appreciation of interests that they are pursuing. This includes the use of a varied and differentiated assortment of learning materials, supplies and resources, as well as frequent trips to visit individuals, organizations, businesses, and/or communities in the New York Metropolitan area that can enlighten and enrich students' understanding, knowledge and experience in a given area of interest.

The school is independent, funded by tuition, grants, and individual contributions and donations and operates from September through June, as a day school, essentially mirroring

the NYC public school calendar in most respects. The school opened in September, 2004. The annual tuition is \$9,500 per year for 2005-2006, with reduced tuition granted on the basis of need. The goal of the school in this area is to be open to all.

Download the current Brooklyn Free School flyer in either [black & white](#) (209kb) or [color](#) (290kb). Please help us by distributing these flyers to your friends and associates, or by posting them up around your neighborhood. We appreciate your support. (Please note you will need the free Adobe Acrobat Reader to view this file. If you do not have the plugin [click here to download it](#) from Adobe.)

Wired.Com, April 9,2009, "At Argonne National Laboratory, nickel particles in a beaker are building themselves into magnetic snakes that may one day give clues about how life originally organized itself...These chains of metal particles look so much like real, living animals, it is hard not to think of them as alive. But they are actually bits of metal that came together under the influence of a specially tuned magnetic field."

"It behaves like some live object," says physicist Alex Snezhko. "It moves. It crashes onto free-floating particles and absorbs them. Looking at how their particles self-organize, the scientists see echoes of herds of sheep and schools of fish. It seems that there might be some common rules that underpin the behavior and movement of groups of things, but it's not clear what those rules are. ..Perhaps, by studying this simple system, they can understand what Aronson calls "the fundamentals of self assembly, how nature can organize itself into ordered states." The idea is that if they can determine how magnetic

fields and water tension can excite these particles into complex emergent behavior, they will get closer to understanding more complicated, messier systems — like the primordial soup from which life arose on Earth.”

LISA W. FODERARO said:(NY Times 5/18 2009)

As Web sites are transforming the way undergraduates study, some wonder whether they encourage cheating and undermine learning.

The finding your passion changes everything, Robinson, Ken and Aronica, Lou. *The Element* 2009, Viking Penguin New York. Page 1, “I believe passionately that we are all born with tremendous natural capacities, and that we lose touch with many of them as we spend more time in the world. Ironically one of the main reasons this happens is education. The result is that too many people never connect with their true talents and *The Element* ,therefore don’t know what they’re really capable of achieving.”

In that sense, they don’t know who they really are.

Virtues of Distraction, 5/17/09 NY Times: “The most promising solution to our attention problem, in Gallagher’s mind, is also the most ancient: meditation. Neuroscientists have become obsessed, in recent years, with Buddhists, whose mental discipline can apparently confer all kinds of benefits even on non-Buddhists. (Some psychologists predict that, in the same way we go out for a

jog now, in the future we'll all do daily 20-to-30-minute "secular attentional workouts.") Meditation can make your attention less "sticky," able to notice images flashing by in such quick succession that regular brains would miss them. It has also been shown to elevate your mood, which can then recursively stoke your attention: Research shows that positive emotions cause your visual field to expand. The brains of Buddhist monks asked to meditate on "unconditional loving-kindness and compassion" show instant and remarkable changes: Their left prefrontal cortices (responsible for positive emotions) go into overdrive, they produce gamma waves 30 times more powerful than novice meditators, and their wave activity is coordinated in a way often seen in patients under anesthesia."

"This is it," implies awareness. Awareness as Deepak Chopra uses the term, includes awareness of oneness with everyone and everything. Chopra said: (From Nipun Mehta, [charityfocus.com](http://charityfocus.com).) "The universe thinks and acts through you. You are not the result of physical forces that have driven all of creation, with human intelligence being a late-stage by-product. Rather, a universal intelligence is experiencing itself through countless forms. You are one form of this intelligence, and yet you are also the whole. Just as a cell in the body is expressing the body's wholeness, you are expressing the wholeness of creation at this very minute."

"To be the light of the world, you must understand that the world itself is light - that is, pure awareness manifesting itself in physical form."

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