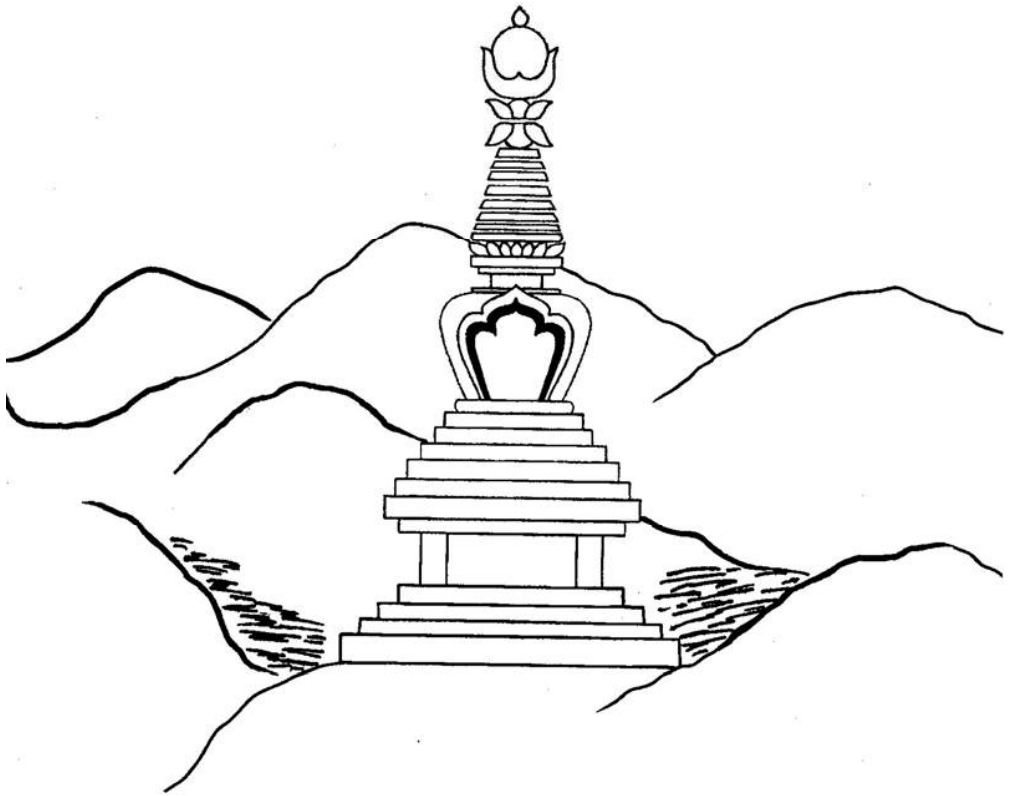


Bulletin of Tibetology



VOLUME 46

No. 2

2010

NAMGYAL INSTITUTE OF TIBETOLOGY
GANGTOK, SIKKIM

Patron

HIS EXCELLENCY SHRI BALMIKI PRASAD SINGH, THE GOVERNOR OF SIKKIM

Advisor

TASHI DENSAPA, DIRECTOR NIT

Editorial Board

FRANZ-KARL EHRHARD

ACHARYA SAMTEN GYATSO

SAUL MULLARD

BRIGITTE STEINMANN

TASHI TSERING

MARK TURIN

ROBERTO VITALI

Editor

ANNA BALIKCI-DENJONGPA

Assistant Editors

TSULTSEM GYATSO ACHARYA

THUPTEN TENZING

The Bulletin of Tibetology is published bi-annually by the Director, Namgyal Institute of Tibetology, Gangtok, Sikkim.

Annual subscription rates: South Asia, Rs150. Overseas, \$20.

Correspondence concerning bulletin subscriptions, changes of address, missing issues etc., to: Administrative Officer, Namgyal Institute of Tibetology, Gangtok 737102, Sikkim, India (directornitsikkim@gmail.com). Editorial correspondence should be sent to the Editor at the same address.

Submission guidelines. We welcome submission of articles on any subject of the religion, history, language, art, and culture of the people of the Tibetan cultural area and the Buddhist Himalaya. Articles should be in English or Tibetan, submitted by email or on CD along with a hard copy and should not exceed 5000 words in length.

The views expressed in the Bulletin of Tibetology are those of the contributors alone and not the Namgyal Institute of Tibetology. An article represents the view of the author and does not reflect those of any office or institution with which the author may be associated.

PRINTED IN INDIA AT VEE ENN PRINT-O-PAC, NEW DELHI

BULLETIN OF TIBETOLOGY

Volume 46 Number 2 2010

SCIENCE, SPIRITUALITY AND EDUCATION

International Conference, Namgyal Institute of Tibetology
Gangtok, Sikkim 20-23 December 2010

THE SPIRITUALITY AND EDUCATION PAPERS

| | |
|---|-----|
| H.H. THE DALAI LAMA Conference Opening Address | 7 |
| BALMIKI PRASAD SINGH, H.E. THE GOVERNOR OF SIKKIM Conference Opening address | 15 |
| BALMIKI PRASAD SINGH, H.E. THE GOVERNOR OF SIKKIM The Bahudhā Approach: A Path Towards a Harmonious World | 19 |
| ADELE DIAMOND Ways to Achieve the Goals of Education: Insights from the neuro-sciences, psychology and teaching | 35 |
| MEENAKSHI THAPAN Schooling, Identity and Citizenship Education: an ethnographic study | 69 |
| JEAN K MILLER Social Emotional Learning and Education | 87 |
| KHENPO NGAWANG JORDEN Meditation of Dependent Origination | 99 |
| <i>Notes on Contributors</i> | 115 |

MESSAGE FROM THE DIRECTOR

TASHI DENSAPA

Director, Namgyal Institute of Tibetology

An international conference with the theme *Science, Spirituality and Education* was held in Sikkim in December 2010. The conference, organized by the Namgyal Institute of Tibetology, was inaugurated and the occasion blessed by His Holiness the 14th Dalai Lama.

The State Government of Sikkim had assured His Holiness that it would take appropriate steps for moral ethics to be introduced in the schools under the Department of Human Resource Development.

In line with this assurance, the Namgyal Institute of Tibetology is pleased to publish in this issue of the *Bulletin of Tibetology* some of the articles more specifically concerned with Education and Spirituality. The articles pertaining to Science and Buddhism were published separately in *Bulletin of Tibetology* Volume 47, Number 1 and 2 (2011). We hope these may be of use to the teachers and students of Sikkim and beyond.

ADDRESS BY H.H. DALAI LAMA¹

Indeed, I am very happy to come here. During the 1956 Buddha Jayanti celebrations, I came through Sikkim and returned from this town, from this very area. Emotionally, Sikkim is very close with Lhasa; I think perhaps from Lhasa, Dharamsala is quite far. I was born in Amdo area. For about 3 to 4 years, I remained there, and the rest of the years, I lived in Lhasa; so, emotionally, Sikkim is very close in our mind. There has been a lot of progress here, indeed, and I am very happy.

Now, the conference or dialogue with modern scientists has lasted, I think, around 30 years. Originally, it was my own personal curiosity. Since my childhood, I have had a keen interest in technology, and about science. Then eventually, it became quite clear that the meeting with modern scientists is of immense help to mutual learning. Now, this kind of dialogue actually is institutionalised.

In the past several years now, selected monk students have been carrying out the study of science in Tibetan refugee monastic institutions. Now that we already have translations in Tibetan about science, eventually, these have been introduced in these big monastic institutions. Originally, some of our older scholars and *geshes* had a little reservation when I said it is necessary to study science. They say they had a little reservation, but now they find it is very useful.

Actually, I think 40 years ago, when I indicated or expressed to some of my friends—some Americans, actually Buddhists—my desire to open dialogue or discussion with modern science, some of them actually cautioned me, “Be careful, science is the killer of religion, so therefore, be careful.” Then I thought, thought and thought: How? No!

In Buddhism—Pali tradition; then Sanskrit tradition, like Nagarjuna; and many great masters of Nalanda, which was a monastic sort of university—see, they very much emphasised scepticism; they waited for the scepticism, and investigated. Through investigation, then you will find the reality. Without investigation, you cannot find reality; without scepticism, you may not bring about investigation.

Buddha himself expressed or told his followers: “Oh, my followers, *bikshus* and others, should not accept my teaching out of faith and

¹ Transcribed from an audio file by Angee Denzongpa with minimum English editing by Tenzin C. Tashi.

devotion, but rather through investigation and experiments.” Therefore, we Buddhists have some kind of liberty to investigate even Buddha’s own word. Nagarjuna, Arya Sangha, Arya Deva, Buddha Prabita, Aryabhata, all these great masters, they followed the Buddha’s advice, Buddha’s own word; they carried out investigations as to whether certain points mentioned in certain text of Buddha’s own word could become acceptable or not through logical investigation. If we take certain points, even in Buddha’s own word, but still find contradiction with reason, with experiment, then we have a right or liberty to reject that. Therefore, that is a very scientific way or sort of study. So therefore I thought, no problem, whether science is really a killer of religion or not, I have to investigate. Therefore, we started with meetings or discussions with scientists. Now it seems, instead of being a killer, science is becoming more of a supporter. This is just a sort of a background, a short history about that (interaction with scientists).

Then a few months ago, you (Director NIT Tashi Densapa) came to Dharamsala to start discussions. Then I suggested that this kind of conference should take place in Sikkim, it’s very relevant. In the meantime, I also stated a fact; frankly speaking, if this kind of meeting takes place here, that also gives me an opportunity to come. So now, this meeting has materialised, and also, I have had the opportunity to come, but the timing, the season, it is quite cold. I think, for our guests, the scenery is really beautiful, but it is quite cold. Anyways, I am indeed very happy.

Now, I just want to mention three points:

1) On the academic level, the knowledge level, modern science in the field of external things is highly developed, and really remarkable. Yet, with regard to inner science about the human mind, about inner peace or mental stability, everybody is very experienced but there is very little knowledge about how important this is, and how to develop these things. So in these fields, I think Eastern philosophy, particularly India’s traditions contain lots of material about emotions, about the mind, and how to shape a positive sort of mind, transform a positive mind, and also the methods. Buddhism and Hinduism, Jainism, all Indian traditions, for thousands of years, they have carried practices of *Samadhi* and *Vipassana*, all these are related to the mind. So here, we have quite rich information about inner science. In order to become more complete, modern science must focus on external things and internal things. This kind of dialogue is actually helping to expand our knowledge about inner science, and inner reality. That is the first point.

2) The second point is, I always tell people: I am Buddhist. Of course, I am a practitioner, with four to five hours of meditation or prayers in my daily life, but still I am very sceptical about the power of blessing, about the power of prayer. Just a few months ago, I was in Japan, where in Hiroshima, there was some meeting of Noble Laureates. On the final day, there was a big gathering, and those Noble Laureates, and I expressed my view that ‘world peace’ cannot come through prayer, through blessing; peace must come through our action, action is more important than prayer, than blessing.

Also, a few months ago, I was in Patna. The Bihar Chief Minister constructed a huge *vihara*. He invited me, so I went there. In his speech, he mentioned that due to Buddha’s blessing, Bihar state would progress rapidly. Then it was my turn to talk. Of course, I know the Chief Minister very well, so I told him, if Bihar state’s development is due to Buddha’s blessing, then Bihar state should have developed much earlier. The reality is, while Buddha’s blessing is there, it is taken for granted. The Buddha’s blessing must go through active Chief Minister’s hand, through his action.

Now, I think, due to Buddha’s blessing as well as Padmasambhava’s blessings, if you do nothing, but just remain there, or add some lamas carrying out *pūja* day and night, your progress will not happen. You must work hard, that is important. My point is, for the last few thousand years, human being on this planet pray whenever they face some problem or difficulties. Individually, yes, we pray. Some help, but not on a community level, no.

I think science and technology developed around two-three centuries ago. Technology immediately brought certain things that we wanted, so naturally, people felt science and technology were really miracles and really bring some big change, so naturally people paid more attention to technology, or science and material things. Since then, people gradually neglected our inner values. The last century, twentieth century, has been a truly marvellous century. Technology and science really developed immensely, but in the meantime, it also brought a lot of scientific knowledge and technology, and the ability of becoming destructive forces including nuclear weapons and neutron bombs. Technologically, and scientifically, these were really great achievements, but these achievements brought more fear and more destruction instead of bringing more happiness. According to some historian, in the twentieth century, over 200 million people were killed through violence. Although the concept of war has been there for thousands of years, the destruction has been limited because the

destructive power was limited. In the twentieth century, the power of destruction increased immensely because of technology, because of science. I think the people who invented science and technology never intended to bring more suffering, and more fear to humanity, but it came about to be like that. This clearly shows that if we just leave science and technology alone, we will not be very sure whether it really brings happiness or fear. This is one factor.

I think due to these factors, in the latter part of the twentieth century, the top scientists began to feel the importance of the human mind and certain human emotions in two ways. One way is to share knowledge—like you are now here, great scientists who carry out research about the brain; naturally, brain particles are very much linked with emotion. If there is a change, certain emotions come; these emotions have some effect on our brain. The academic research about subtle levels of brain neurons has reached a very high level, so they now begin to pay more attention to emotions and mind on an academic level.

Then on another level also examined earlier, more and more people are now really talking that we need moral ethics in every field. In the field of religion also, due to lack of moral ethics, religion is also sadly becoming an instrument of exploitation. It has also happened among the Buddhist community. Then with all other religious traditions, due to lack of moral principles, some dirty things are happening. I share with other people, usually people say ‘dirty politics’—Governor above politics, Chief Minister still very active in politics—so with politics, people usually say ‘dirty politics’. I have the view that politics is very important, it is another sort or kind of instrument to serve people, to serve community, to serve the country. It is necessary, but politics itself is nothing dirty; because politicians lack moral principles, politics becomes dirty politics. So, similarly, in religion, if people like myself, with monk’s robe, if we think only of money, or name, and use religious teachings, then that religion also become ‘dirty religion’. And even the economy, or even with scientists, with lack of moral principle, science can be ‘dirty science’, so therefore now we really need to look everywhere: corruption is now almost like a universal disease. A few people are killed; the death sentence is not asked for. You must beg for moral ethics based on realization of human value. Therefore, now it is quite obvious, whether we are religious believers or non believers, everywhere more thinking people accept or realize that we have some problems due to lack of inner strength or moral ethics.

Now in order to promote these moral ethics, here is a different view. Some of my friends, some Christians, some Muslims, they show me great reservation when I use the term ‘secular ethics’—they say secularism is something a little negative towards religion. They have this kind of understanding or view, and many believers also believe that any moral ethics must be based on religious faith. You know, the late Pope John Paul came from Poland. He had a similar sort of experience with the Poles, so since our first meeting, we became very close spiritual fellows—we shared a sort of brotherhood, we were very close. So one time, I boldly asked him whether moral ethics should be based on religious faith or not. He did not answer, but his lieutenant answered, “Oh, any moral ethics must be based on religious faith.” My point is, if everybody accepts moral ethics is necessary, if moral ethics must be based on religion faith, then in a place like India, it causes further complication: What religion? What faith? Here, Sikhism I think, later developed and I think is very much into the spirit of non-sectarian bias, wonderful. Isn’t it wonderful that Guru Nanak, at one time, went on pilgrimage to Mecca? Anyway, there are so many different religions in this country, it is so difficult. So naturally, because of that reality, our forefathers like Gandhi, Rajendra Prasad, and Dr Ambedkar, and all these scholars and lawyers, when they made India’s constitution, they decided that India’s constitution must be based on secularism. So secularism does not mean disrespect of any religion, but rather respect all religions as being equal.

So secularism does not mean some kind of negativity towards religion. There must also be a secular way to promote ethics. In my view point, any ethics is based on a sense of concern for others’ well-being. If you have a genuine sense of concern for others’ well-being, then there is no room to harm others, there is no room to cheat, there is no room for exploitation. As long as a sense of concern of others’ well-being exists, then you can be transparent, and truthful, that really brings trust, for trust is the basis of friendship. We are social animals, we need co-operation, for that we need genuine friendship, and we need trust. In order to develop trust, you should be honest, and transparent. If you are saying something, and doing something different, then how can trust develop? If Inner strength is there, more compassionate feeling is there—inner strength, real inner strength that allows us to be self-confident and open to everybody—that’s the basis of trust, for mutual trust. So now we are here, not necessarily for religion and faith, we are just using our common sense, using our common experience. I always tell people—for example, there are perhaps a few hundred people

here—everybody comes from one's mother. At a very young age, everybody received maximum affection from one's mother. I think scientists can find people outwardly have a smart appearance but deep inside, those individuals who received maximum affection from their mother are much more stable than those individuals who lacked affection from their mother. People who have some kind of fear due to abuse or other such experiences as a child, will, for the rest of their lives, harbour deep inside, some kind of sense of insecurity, that brings frustration, and lack of self-confidence, and that creates more problem.

So, therefore, these are moral ethics not based on religious faith. Using common sense and common experience, then the scientific finding, as a great scientist, both, clear presentation, these are very useful, more warm heartedness is immense benefit to happy family, happy individual, even healthy body. Then ultimately, world peace, or genuine equality, or reduction of the gap between rich and poor (on a global level as well as national level), all this is ultimately related with inner moral ethics. So, if inner moral ethics should be pursued through religious faith, then more complication will arise; pursuing without touching religion is simply the secular way to promote this. This promotion, as you mentioned, happens in the young by educating them. Moral ethics is one's own benefit, one's own happy life. Everybody is selfish, so if people realize this warm-heartedness is of immense benefit to one's self, one's own family, then they will pay more attention to these things. If we say, you should practice compassion because Buddha loves compassion, or Jesus Christ loves compassion, then many people say, "Oh, I don't care." But, if we say, compassion is important for your own health, for your own happy days and nights, then it is clear people pay more attention.

I think I am Buddhist, I have due respect for Buddha and all other spiritual leaders. I think they showed us certain methods to promote these things, but frankly speaking, they more or less failed. Of course, some individuals did benefit, but I don't think humanity as a whole, nearly seven billion human beings, benefited. Now we need to promote ethics secularly—not through lama, not through teacher, not through saint, but through education—we can do it using these materials, and the most important part are the scientific findings. So that's point no 2. That's why in order to bring about a happy humanity, a happy society, a happy individual, moral ethics are important but the way to promote this is not through religion, not through religious faith, but through secularity, based on scientific sort of research, and findings.

3) Then, the third point. As I mentioned earlier, those traditions of India have lots of information about the mind. Within that tradition, I think, in Buddhism, in the basic Buddhism structure, the final result comes through method or practice; method must be realistic, in order to carry realistic method, we must know the reality. Therefore, I divided Buddha Dharma into three parts: science part, ideology of philosophy part, and then practice. As far as Buddhist practice is concerned, it is only for Buddhists, but Buddhist science and Buddhist philosophy is something universal. Therefore, in this field we are discussing with scientists, it is never about Buddhism as a religion. For many decades, whenever we have had discussions, I never touched on next life, or *karma*; these things are our business, not their business. Our common responsibility is how to build a happy society, a healthy world; that's our common responsibility, not talking about next life. In the next life, Buddhists will be taken care of by Buddha; whether people go to hell or to heaven will be taken care of by Jesus Christ.

Firstly, of course, Buddhism came from India to Tibet, and reached Tibet in eighth century, ninth century. I always say proudly that we are the real holders of the real Nalanda tradition—for every important matter about Buddhist concepts, we are already reliant on Nalanda masters, or their quotations or reasons, so we are truly followers of the Nalanda tradition. So that is why I always used to say, we are *chelas* of India, and Indians our *guru*. Our relationship is something like the relation between *guru* and *chela*. Sometimes, I proudly tell my Indian *gurus* that we are not only just a *chela*, but also a quite reliable *chela*. The original home of Buddha Dharma—including Nalanda institution, Vikramashila, and Takshishila—was at that time, of course, also part of Hindustan. However, due to some invasions and other different reasons, these areas almost disappeared. During these many ups and downs in the *guru's* own land, we *chelas*, through centuries, kept intact those Nalanda traditions. That is why we are quite a reliable sort of *chela* or student.

Anyway, eventually from Tibet, Buddhism came to this belt or the Himalayan range. From Ladakh up to Mon, I think every monastery, every *gonpa*, and also those richer families, have *Kangyur*, *Tengyur*, or *Yum*, *Bum*, *Nyintik*, *Gyatongba*, so that means you are follower of those traditions. Likewise in Sikkim.

Since my second or third visit, I told the Governor as well as the Chief Minister at that time, that within the state of Sikkim, there are different believers: Buddhists, Hindus, very few Jains, maybe some Muslims, and some Christians, but state as a whole, is essentially a

Buddhist community. There are so many monasteries and *gonpas* here. Therefore, I think as one important aspect of Sikkim, or one important aspect of Sikkimese identity, Buddhist culture is very important. It is important to keep and to preserve Buddhist culture. When I say culture, Buddhist culture, it relates to the community. For example, in Tibet, in Lhasa, I think that the Muslim community has been there for at least four centuries. But while for these people, these families, the religious faith is Muslim, Islam, their way of life is very much in the spirit of our Buddhist culture. So, when we talk Buddhist culture, it is related to the whole community. Buddhist religion is an individual matter. So, Sikkimese society as a whole, community as a whole, I think Buddhism is really part of your own culture, and realistically, it beneficial to keep the Buddhist culture alive.

I was told, in recent years, you have received lots of money from the Central Government, so you have spent lots of money on buildings. There is the danger of forgetting the inner value and Buddhist culture, so you must make special effort to promote the Buddhist culture, not through prayers but through study, through education. That is the third point I want to make.

I thought it is relevant that this kind of meeting should take place in an area where Buddhist culture has traditionally been there. That's my reason, so I urged him (to organise the conference).

I really appreciate all the concerned people who organised this meeting, I really appreciate it, thank you. Now, these three days of deliberations will be, I think, useful to some people, and open your awareness. So now we will spend a few days here, then we will leave. On 23rd December I am leaving, these professors are also leaving. So, now people, local people, you have the responsibility to carry these ideas, to implement these ideas. It is entirely your own responsibility, entirely dependent on your own actions. Thank you.

ADDRESS BY SHRI BALMIKI PRASAD SINGH
HIS EXCELLENCY THE GOVERNOR OF SIKKIM

I am happy to be here in the august company of our beloved spiritual leader, His Holiness the Dalai Lama, to inaugurate and participate in the international conference on *Science, Spirituality and Education*. It is, indeed, heartening to see so many persons of eminence in the field of education and spiritual knowledge present here this morning. Personally, I consider it a great privilege and a blessing to be able to welcome His Holiness to this sacred land of Guru Padmasambhava and for His willingness to share his vast spiritual knowledge in this conference. I join the organizers in warmly welcoming each one of you. I am in no doubt that this three day conference on *Science, Spirituality and Education* will come out with concrete recommendations to connect the three important subjects to the benefit of mankind.

I congratulate the Namgyal Institute of Tibetology (NIT) for selecting the theme of *Science, Spirituality and Education* for the conference and for making it possible for confluence of thought processes on the three subjects which are interlinked in myriad ways.

It is true that scientists and spiritual masters have pursued separate paths to better their own field of study and experience. While growth and development of science have immensely benefitted mankind materially and in raising standard of living, spiritual knowledge and experience remained as the preserve of few masters and their disciples. But one must appreciate that Spirituality is the other name for Moral Science and without the base of Moral Science, science per say can usher in disastrous consequences both to nature and human beings.

At this day and age of breathtaking scientific and technological advancement and development, the world is becoming a dangerous place to live. The kinds of lethal weapons we have manufactured have given us a sense of invincibility, without realizing their destructive potential. High demands for consumerism and materialism have increased the risk of global warming and pollution. It seems man in his quest to progress in all fronts looks to conquer nature. But it is only when we are faced with the natural disasters that we realize how small and powerless we are.

Our priority, therefore, should be to first save our planet and the species inhabiting it from our greed and ravages of nature.

By nature we all yearn for lasting peace and prosperity but by action we sometimes work against it. If scientific advancement alone was a recipe for peace, then today the rich and developed nations should have no socio-economic problems but we all know this is not the case.

Today's complex lifestyle also takes a toll on both physical and mental well-being. In our quest to keep up with the rest we tend to over exert ourselves. This leaves the mind stressed and body exhausted. Spiritual knowledge can help us relax and appreciate life. It would also make us have love and compassion for others. Spiritual knowledge and experience, therefore, enrich our mind to appreciate life in its many folds and restrains us to act in a manner that would not endanger the life of other species.

Fortunately, in recent times spiritual masters and learned *gurus* are writing books on the subject of spiritualism and also imparting teachings at various forums. As a result more and more people are learning to appreciate and turn to spiritual pursuits while enjoying the progress of scientific and technological innovations. It is being increasingly realized that the world will be a better place to live in if we combine the knowledge of science and spiritualism and propagate that knowledge through education and awareness.

Time has come to educate the young minds about spiritualism. Spiritual education may not necessarily be based on a particular religion. The main focus should be to make the future leaders and policy makers compassionate and tolerant, irrespective of caste, creed, nationality or religion. Challenge before us is how to bring about this transformation in the present education system.

The educational system must evolve to meet the daunting challenges of the 21st century. It must nurture the heart as well as the mind to lay the foundation for compassion so that every individual utilizes his skills and abilities not only for personal growth and advancement but also for the good of the world.

In discussing interface between science, spirituality and education, there is a need for emphasizing the importance of a rational approach. Lord Buddha's prescriptions in this respect are greatly relevant. Buddha attached greater importance to rational enquiry than perhaps any other religious leader in history. The Buddha says in a sutra: "Monks and scholars should well analyse my words, like gold [to be tested through] melting, cutting and polishing, and then adopt them, but not for the sake of showing me respect." By this Buddha meant that even if a particular doctrine is set forth in scriptures, one must examine

whether or not it meets the test of reasoning, if it conflicts with reasoning, or is at variance with new realities, it is no longer appropriate to assert its primacy and follow its dictates. This applies to Buddha's sayings as well.

Religion has played a great role in building up of human beings and society. But in an age of science we cannot be called upon to accept incredible dogmas. Towards this, scholars need to reflect and bring to public notice stands taken in a scripture which have been scientifically proved as no longer valid. This approach may also apply to gender biases and caste and community prejudices.

A fundamental change in attitude is necessary. When we investigate certain descriptions as they exist in sacred texts and find that they do not correspond to reality, then we must accept the reality, and not the literal scriptural explanation.

The challenges of an inter-dependent world demand a new vision. It is high time for scientists, educators and spiritual masters to come together to plan how contemplative practices can be adapted in the class rooms by means of an inter-disciplinary approach that includes expertise in education practices, applied and basic sciences, and the wisdom of life.

The general impression that the spirit of science is opposed to that of spirituality is both unfortunate and untrue. The basis of both science and spirituality is to construct a reasoned argument of nature and way of life.

It also needs to be appreciated that a knowledge-based world is an open world. When we talk of the fusion of science and spirituality, we are not putting any limitations on the autonomy of either scientific or spiritual endeavours. Any limitation on the objectivity and autonomy of science and any prescription for a singular path of spirituality would come in the way of progress and peace and thus could not be beneficial for the development of a harmonious world. The need is to work for the development of a more cohesive and inclusive world view in which science and spirituality are complementary and mutually reinforcing.

There are people who fear that an emphasis on values in education would push us back to an ancient era. These fears are unfounded. What is true is that religion and spirituality were developed by our ancestors much more than science. What characterizes the past century as well as the present is the phenomenal progress in science. The task of linking spirituality and values with present day developments in science and technology is essential for building a global peaceful order. For it is only through spirituality that the forces of greed, hatred, and

despondency can be overcome. The world's great civilizational traditions provide us wisdom which promotes peace of mind and cultivation of qualities such as compassion and tolerance.

Education is a transformative experience. For good education we need good teachers. It is the duty of teachers to ensure that educational institutions become centres, both for attaining proficiency in science and the arts and also for the cultivation and enrichment of self-discipline and social and moral values. Rabindranath Tagore put it aptly when he said, "A lamp can never light another lamp unless it continues to burn its own flame." May this conference help promote multiplication of these lamps.

The moot question is: can we combine the progress of science and technology with the progress of mind and spirit? We have to embrace science and technology for they represent the basic facts of life today. At the same time, we cannot be untrue to values of compassion and tolerance. Industrial progress and market economy need not lead to negation of our civilizational strengths.

Science will triumph over ignorance and superstitions. Similarly, spirituality will prevail upon selfishness and fear. And it is only through the instrumentality of education that people and through them nation-states can be empowered to build a great future for humanity.

In the context of these perspectives, this seminar becomes important to discuss how science and spiritualism can be interwoven to bring compassion in the mind of people and promote sustainable development in the interest of saving the earth from man-made catastrophe. Education can play a significant role in propagating the knowledge of science and spiritualism in the mind of future leaders.

We have all assembled here to hear His Holiness - The living Buddha of our times, on this important theme. I warmly and most respectfully invite him to address and guide us.

THE BAHUDHĀ APPROACH:
A PATH TOWARDS A HARMONIOUS WORLD¹

BALMIKI PRASAD SINGH
H.E. the Governor of Sikkim

I

The Beginning

In a poem entitled *The Sunset of the Century* written on the last day of the 19th century, the famous Indian poet Rabindranath Tagore wrote: “the last sun of the century sets amidst the blood-red clouds of the West and the whirlwind of hatred.” The mood on the last day of the 20th century, however, was one of hope. Many viewed the conclusion of the Cold War as the end of major conflicts in global politics and the emergence of a harmonious world. This expectation was short-lived.

In the morning of 11th September, 2001 as the aircraft flown by Al-Qaeda attacked USA’s World Trade Center at New York, Pentagon—its defence headquarters in Washington DC; and in the plains of Pennsylvania—a new era began. The attack lasted just 102 hours but heralded an era that has forced a more realistic appreciation of the world.

It firmly established that religiously motivated violence will pose a major threat to world peace. It became a landmark not only in the lives of those who were physically affected and had barely survived but also of numerous others including myself. The response of individuals, however, varied.

Ten days later on September 21, 2001 President George W. Bush in his address to the American people declared America’s commitment “to the destruction and to the defeat of the global terror network” and went on to assert “every nation in every region now has a decision to make: either you are with us or you are with the terrorists.” Soon commenced the military attack on Afghanistan. The regime change in Afghanistan was followed by invasion of Iraq and more recently the entry of the US navy seal in Abbottabad in Pakistan on 1st May, 2011

¹ This monograph is based on Maulana Azad Memorial Lecture 2011 organized by the Indian Council of Cultural Relations, New Delhi that I delivered on 11/11/2011 and my book *Bahudhā and the Post 9/11 World* published in 2008 by Oxford University Press. [Editor’s note: although not delivered at the *Science, Spirituality and Education* conference, this article is included in this collection because of its relevance to general theme of the present volume.]

leading to capture and killing of Osama bin-Laden, the leader of Al-Qaeda.

Persons like the young musician P.J. Harvey reacted in a different manner. Polly composed some memorable lyrics including the famous “the mess that we’re in and the city sun sets over me.” My own reaction was somewhat different and needs to be narrated.

At the time of this catastrophe, I was Executive Director of the World Bank, at Washington DC. In the aftermath of the tragedy, it became fashionable for every think-tank to discuss two questions: ‘What went wrong?’ and ‘Why people hate us (Americans)?’ I happened to attend one such meeting during September itself. The gathering was impressive, I was seated almost opposite the Chairperson. The guest speaker had concluded on the somber note of the need for building a coalition of nations against terrorism. He also spoke of the radicalization of Islam, values of religious pluralism, and the need for tolerance. The presentation over, the Chairperson asked for comments and looked at me. She said that India may have the answer in view of its heritage of pluralism and originality of mind, and gave me the floor. I was not prepared. I recall having said then that “while India may have the answer, I do not” and went on to narrate my experiences in handling terrorism in India. I was aware of the inadequacy of my response. For the real question was: What could we do to achieve harmony in a world so globalized, yet with nations so unequal, living in mutual distrust, fear and worse terror?

Since then I have been contemplating this theme with a view to explore an enduring framework for a global public policy—a policy for harmony among different people and societies in the post 9/11 world as seen through the lens of the Indian experience.

The Bahudhā Approach

I would like to call the approach I am suggesting *Bahudhā*. This comes from my personal attachment to an attitude that has greatly contributed to the enrichment of harmonious life in India: ‘respect for another person’s view of truth with hope and belief that he or she may be right.’ This is best expressed in the Rigvedic hymn that enjoins:

Ekam Sad Vipra Bahudhā Vadanti

The Real is one, the learned speak of it variously

Etymologically speaking, the word *Bahudhā* is derived from the word *bahu*, and *dha* is suffixed to it to make it an adverb. So, what does

Bahudhā mean? *Bahu* denotes many ways or parts or forms or directions. It is used to express manifoldness, much, and repeatedly. When the word is used with the root *kri*, it means to make manifold or multiply. *Bahudhā* is also used as an expression of intermittent continuity in various time frames. It is used to express frequency, as in ‘time and again’. *Bahudhā* suggests an eternal reality or continuum, a dialogue of harmony, and peaceful living in society.

Pluralism could be the closed equivalent to *Bahudhā* in the English language. Pluralism has been described in various ways in history, sociology, and politics—cultural pluralism, political pluralism, and pluralistic societies. Pluralism has also been seen in the context of the co-existence of nation-state and ethnicity, equality and identity issues.

The *Bahudhā* approach recognizes that there is a distinction between plural societies and pluralism. Pluralism is an inevitable ingredient of democratic societies. The role of religion, language, and ethnicity is very significant in plural societies. Pluralism in this context is an imperative for both developed and developing societies.

Pluralist societies are necessarily multi-ethnic, multi-religious, and multilingual societies. In such societies, there are various boundaries: racial, linguistic, religious, and at times even ideological. The *Bahudhā* approach does not believe in annexation or transgression of boundaries or assimilation of identities and propagation of a simplistic world view. It merely facilitates dialogue and thereby promotes understanding of the collective good. The realization of one’s own identity may sustain boundaries and yet, at the same time, understanding of other identities may help formulate a public policy of harmony. The *Bahudhā* approach is conscious of the fact that societies without boundaries are not possible.

The culture of *Bahudhā* is deeply rooted in the inculcation of a special attitude from an early age. Dialogue requires a state of mind where one can strongly believe in one’s own way of looking at issues while simultaneously accommodating another’s point of view. It is this mental discipline that makes one willing to consider the validity of other person’s view point.

In short, the *Bahudhā* approach is both a celebration of diversity and an attitude of mind that respects another person’s point of view. Democracy and dialogue are central to this approach.

Diversity celebrates different religions, gods and goddesses and belief systems. It also promotes a feeling that the world would be a dull and over-uniform place if there was only one religion, one god, one language, one folklore and one folktale. The human species cannot be

all of one belief or faith or system—humanity is diversity—something we too often forget.

The inculcation of attitude of mind inspired by the *Bahudhā* approach would mean that one hears others in a manner that is akin to our behavior with family members or with our neighbours. This could help us appreciate and even adopt good practices and value systems of others without diminishing our own.

How is *Bahudhā* relevant in terms of formulation of public policy of harmony in our modern world?

II

The World We Live in

It is imperative to realize that global politics is rapidly changing both in its character and content. The era of rational behaviour on the part of nation-states which was the main objective of the world order set up by the Treaty of Westphalia of 1648 no longer holds good. Between the Russian revolution in 1917 and the fall of the Berlin Wall in 1989, even reign of ideologies has been replaced by market interests and individual and group emotions in international relations. People as well as nation-states are increasingly getting conscious of their identities and their place in the world.

At the risk of over-simplification, the vital question in this changed world is ‘How should we live?’

In this broad context, the relevance of *Bahudhā* approach in the contemporary world could be viewed in the context of a series of interrelated happenings such as globalization and its discontents; the yearning for freedom and hope for a decent livelihood among youth; the increasing importance of religion in human affairs; and the rise of terrorism caused by and/or accompanied with a sense of fear, revenge and humiliation.

Globalization and its Discontents

Globalization, the new international system, has integrated markets, nation-states and technologies to a degree never before witnessed. This new process is enabling individuals, corporations and countries to reach around the world further, faster, deeper and cheaper. It is true that globalization has, in many ways, strengthened the hold of the United States of America- the sole super power after 1991- over the rest of the world. The recent rise of Asia, particularly of India and China, in

recent years as economic powers, however, is gradually challenging the Western pre-dominance in the world.

In a globalized world the poor are no longer ignorant of the world of the rich. The rich can no longer ignore the tragedies of people of Asia, Africa and Latin America for this could adversely affect them.

The Arab Spring

Today, there is lot of hope in the Arab world. The changes that began in the first year of the second decade of the twenty-first century in the Arab World constituted a titanic movement in history. It reminded one of the nature of changes that were set into motion in the last decade of the twentieth century that commenced with the fall of Berlin Wall, dissolution of the Soviet Empire and democratic freedom for the east European countries.

The ‘Jasmine Revolution’ of January, 2011 in Tunisia—so named in view of the pride of place that jasmine occupies in Tunisian society was filled with talk of democracy and freedom. It was facilitated by use of the mobile phone, the Internet, Facebook and Twitter- the new instruments placed in the hands of youth by Information and Communication Technology (ICT) revolution. Egypt and several other Arab countries including Yemen, Syria and Libya followed suit. The massive and spontaneous nature of street-protests posed decisive challenge to the rule of autocrats and dictators. It was a huge reaction against rulers who were stealing wealth of the community and depriving people of their freedom.

In future, it may well that the Arab World would be ruled by democratically elected leaders. The Arabs will exercise their rights to regime change as in European countries, the US and India. It will, however, take time for democratic institutions like the legislature, the judiciary, the media and the election commission to acquire firm roots and autonomous and independent character.

In a globalized world, the youth are nurturing hope based on doing better in this world here and now. They are no longer believers in fate nor do they entertain the belief in some future better world, either on earth or in heaven.

Religious Revival

The world is also witnessing a revival of religions as never before in recent times. There is a revivalist movement among believers in Islam, Christianity, Buddhism, Hinduism, Shinto, and Judaism. There are

signs that many Chinese and Russians are returning to religion. Fundamentalist Islam is asserting itself even among the westernized middle classes of Turkey and Egypt.

Religious resurgence is primarily a reaction to the loss of personal identity and group stability produced by the process of social, economic, and cultural modernization that swept across the world in the second half of the twentieth century. In the second half of the twentieth century economic and social modernization became global in scope. With the rapid decline in traditional systems of authority, some people get separated from their roots in a bewildering maze of new rules and expectations. Such people need new sources of identity, new forms of stable community, and new sets of moral precepts to provide them with a sense of meaning and purpose. Organized religious groups, both mainstream and radical, are growing today precisely to meet these needs. It has pervaded 'every continent, every civilization, and virtually every country'.

Privatization of Violence and Terrorism

Terrorism, including human bombs, is the latest instrument in violent conflicts that are being sanctioned in the name of redressal of religious and ethnic grievances. The story of the Al-Qaeda as a terrorist organization is 'the story of eccentric and violent ideas sprouting in the fertile ground of political and social turmoil'. Islamists believe that 'war on terror' is just a western euphemism for 'war on Islam'. The concerned citizens in different continents are asking: How to stop this cycle of violence that is leading to more violence and suffering?

Today, the spectre of a nuclear holocaust can no longer be dismissed as wild imagination. There is no road map with the United Nations for achieving nuclear disarmament in a time-bound universal, non-discriminatory, phased and verifiable manner. On the other hand, the fact that some 'rogue' nations are already in possession of Weapons of Mass Destruction (WMD), only fuels this growing sense of insecurity. In a way, globalization has aided the expansion of a global terror network. There is now constant sharing of intelligence and technology between different terror outfits around the world. The porous borders, meant to allow free trade, are being exploited by terrorists to carry out subversive activities.

The privatization of violence through terrorism poses a major challenge. Invisible nature of the terrorist threat is a factor that is contributing a sense of insecurity and fear particularly among the rich and the middle class.

Humiliation and Hope

The world is also being guided by a sense of Humiliation and by a sense of Hope. Humiliation is the injured confidence of people and the nation-states when they come to believe that for no fault of theirs they were/are badly treated and that their physical and human resources were/are exploited by a few powerful countries and companies.

On the other side of spectrum, there are several countries where people and particularly the boys and girls are hopeful for their future. They are confident that the future belongs to them and that they will be able to realize their potential in their life-time and leave a better future for their children and grand-children.

The free flow of goods, ideas and technology is being accompanied by rapid rise of a sense of humiliation and other identity related issues. People are increasingly viewing their identity not only in terms of nation-states to which they belong, but also as members of their religious, racial, and ethnic groups. Such consciousness of one's heritage and a sense of pride in it gives them satisfaction. Yet, concurrently, a lack of understanding of and with other members of society about economic opportunities, political rights, and religious sensibilities provides grounds for discord and often degenerates into violence.

Intolerance is on the rise. In spite of the fact that we live in an information age, we do not understand the aspirations and beliefs of other people adequately. Instead, we insist upon images and data that obscure rather than illuminate our vision. On the other hand, the world is growing more complex and individuals, nations and cultures are showing increasing concerns about their identities. All these impact on international politics.

There is something coarse, and at times extremely cruel, in our behavior towards each other. Social and religious resentment accompanied by economic inequality and the exploitation of deprived individuals and backward nations has the propensity to create lasting disturbances in the world. Above all, the problem of terrorism and the ecology crisis call for augmentation of our dialogue processes and enhancement of cooperation skills. It is very evident that the direction of world affairs, unless significantly changed, will bring disaster and tragedy of untold perceptions.

Need for Change and Bahudhā Approach

So we need a new kind of world to be constructed by people, states, and religious communities. Perhaps, the major world religions could seize the opportunities provided by globalization to transform their messages and reach out to a new global audience. Faith informs the daily struggles of millions in confronting larger political conflicts regarding democracy, human rights, and economic development.

In the circumstances, our perception as well as our approach needs to change radically to avoid collapse of the existing international order. This is both for self-preservation and collective survival. The emotional frontier is becoming as important as our geographical frontiers. A tolerant world calls for appreciation of differences and similarities of others with one's values and belief systems. The *Bahudhā* approach is needed both for understanding of other societies and peoples and for living in harmony. How do we secure these?

III

How to Secure Bahudhā

The *Bahudhā* approach could be secured particularly through (i) religious harmony; (ii) educational programming; (iii) strengthening of international political architecture: the United Nations; and (iv) the use of military power in terms of the UN Charter.

Relevance of Religion

Towards the end of the nineteenth century, the famous German thinker Friedrich Nietzsche (1844-1900) made an astounding statement declaring the 'death of God'. Advances in science and technology gave human beings new powers of control over the forces of nature and that, in turn, led several writers and thinkers to declare their independence from God. The Age of Reason had dawned and started asserting itself.

By the end of the twentieth century, however, religion began to re-assert itself and began to influence world events. Politicians, journalists, and scholars started realizing and often exploiting the extremely powerful value of the religious motives of citizens and the need to use their beliefs in the promotion of development, peace and happiness in society.

Simultaneously, religions also witnessed the rise of fundamentalist groups in their midst. Jewish fundamentalists, Hindu radicals, angry Buddhist monks, Christian rightists, and Muslim fundamentalists started catching news headlines. The rise of Islamist elements among believers of Islam, in particular, received extraordinary notice in the West and people began expressing their worldview in terms of civilizational clash between Islam and Christianity.

Culture, theology and territory are linking global and local religious identities as globalization is changing the very nature of religion and its role in international affairs.

Globalization is also making religion more pluralistic. It is felt that the kind of religious monopolies that have benefited the formalized churches in central Europe, the Catholic Church in Latin America, and Hinduism in India will be difficult to sustain. Religion is increasingly, if unevenly, becoming a matter of choices about whether to believe, whether to embrace one particular kind of religion, and, if so, what elements or sect of that religion to embrace.

In coming decades religion is likely to make increasing impact upon and even alter relations of the nation-states in several parts of the world. At a basic level, religion will be an important factor in understanding the general foreign policy orientations of many countries.

Religion is a potent force. As an agent for the generation of peace and happiness, it facilitates goodwill among people, and helps them to lead a life of spirituality and fulfillment. In recent years, people like Mahatma Gandhi and Martin Luther King have used it for achieving justice and freedom. Swami Vivekananda and Mother Teresa were inspired by their religious faiths to serve the poor, the derelict, and the discarded. It is religious faith which has driven the Dalai Lama to propagate the message of love and peace not only among his Tibetan people (including those living in exile in India) but also in distant lands.

The re-assertion of religion in public affairs has also revived the traditional belief that 'my religion is the best'. Identifying religion with dogmas and beliefs had led to several wars in the past and inflicted sufferings on fellow citizens has began receding inhuman consciousness. Several questions are being asked: what is the political role of religion? How does it affect state policy? What is our religious experience?

The well-known Sufi poet Maulana Jalaluddin Rumi beautifully enunciates the Islamic faith when he writes, "The lamps are different

but the light is the same: it comes from beyond.” There are similar expressions in other religions as well. Such ideas strengthen the logic that there can be salvation outside the church or the synagogue, outside the temple or the sangh, and outside the mosque or the gurudwara. Even under the guidance of the same scripture, different communities have developed different ways of worship and communion with the creator. This, in turn, has created manifold forms of religious dialogues and forms of worship.

What we need is a synthesis of these values-spiritual and moral as well as intellectual-with the aim of producing a fully integrated human being. Such an individual would be both inward looking as well as outward looking, who searches his own mind in order that his nobler self may prevail at all times, and at the same time recognize his obligations to his fellow men and the world around him.

Education

Education has a central role to play in building a harmonious society. Education must begin at home as it is here that intolerance towards other faiths has its origins. We know that it is not only love and compassion but also hatred and intolerance that are widespread. Just as people can be taught to hate, they can also learn to treat others with love, dignity and respect. In fact, the issue of public policy of harmony is critically linked with education.

There is an urgent need to focus on the educational curriculum in order to purge it of content that spreads hatred and/or distorts history. Effective education also demands the development of a creative mind and scientific temper.

Utilizing education as an instrument of harmony is not an easy task. The educational curriculum, in particular, has become in several countries an ideological battleground. The interpretation of historical events often excites religious and ethnic groups who start taking positions that are not always rational. Yet, education is the most dependable resource for preparing the youth for initiating dialogue.

We have to look beyond the events that have characterized the global scene since 9/11. Two aspects of education would, however, remain paramount. First, education must strive to create in young minds a willingness to tolerate differences of opinion and the desire to understand different points of view. Second, the massive progress in science and technology has tended to stress the intellectual rather than moral and spiritual values.

Societies marked by a continuing intolerant ethos, in which religious or ethnic groups blindly espouse their narrowest possible perceptions, education can play a role. Patience and time are needed for education to play its expected meaningful role in bringing peace and harmony in the world. The biggest positive factor is that despite all odds youth in many parts of the world are full of hope.

The International Political Architecture: The United Nations

Resolving conflict, however, goes much beyond education. Towards this end, the UN has to be strengthened in terms of its Charter so that it becomes an effective conflict resolution organization. The global political order must reflect the best interests, rules, and practices that states hold in common.

As we look towards the future, it appears that the prevailing nation-state system would continue to be a primary structure. An international order based on the rule of law and consent of nation-states can alone be an effective conflict resolution mechanism.

The UN is the best forum for generation of understanding among nation-states in the realm of politics and economy. It can also be a forum where dialogue among nations can be initiated and sustained. Such dialogues can support efforts towards peace and attempts to resolve conflicts between groups and nations.

The UN needs to be re-organized in several ways: by expanding the Security Council to reflect present day political and economic realities and by funding a permanent peacekeeping force.

Conflict also arises from the growing economic inequality in the world. It is true that the economic progress the world has accomplished during the last fifty years is higher than any in previous periods in history. We are living in a world where the global economy generates over \$60 trillion a year. And yet, nearly one billion people in developing countries live on less than one dollar a day. In this inequitable world, less than twenty percent of the people control eighty percent of the income and resources of the globe. This inequality is likely to increase in view of demographic expansion. Five hundred years ago, the population of the world was about 500 million. The demographic scene has undergone dramatic transformation since then. On 31st October, 2011, we celebrated the arrival of the seven billionth baby in India and in other parts of the world. By 2050, the world's population will increase to 9.1 billion people, and virtually all the population growth will be in the developing world, especially in the fifty poorest countries.

An empowered Economic and Social Security Council would also enable the UN to play a more effective role in reforming the global economic and financial system, represented by the IMF, the World Bank and the WTO. This could enable all nations including the advanced industrial countries a co-operative role in the implementation of the Millennium Development Goals (MDGs).

Use of Force

A question is often posed about the role and relevance of the military in the construction of an environment for creative dialogue among civilizations. In the post 9/11 world, it is quite obvious that the ugly face of terrorism has given full justification for a strong military posture by Governments. In fact, the rise of terrorist activities in different parts of the world demands it. It, however, does not mean that military intervention can be taken in an arbitrary fashion.

In this context, the theory of preventive war enunciated by the United States in its National Security Document of September 2002 explicitly defining its unilateralist approach to terrorism needs to be examined. The UN Charter calls upon member states to attempt to settle disputes peacefully - failing that, to make reference to the Security Council for appropriate action including use of military force in terms of Article 51. The categorical position emerging out of Article 51 is that states refrain from the use of military till an armed attack takes place. This has been repeatedly violated but it needs to be respected for building a harmonious world.

Fortunately, the National Security Strategy announced by the White House in May 2010 does not talk about unilateralism in international affairs in the manner President Bush had prescribed in 2002. This is a significant and welcome departure—a step forward towards rule of law in international relations.

It is obvious but needs to be stated that in the task of updating the current architecture of international institutions, which are so out of alignment with the modern world, no state is in such an advantageous position to promote institutional shifts as the United States.

Rebuilding a New Global Order

There are two other significant aspects of re-building a new global order.

First, the tragedy of 9/11, followed by terrorist attacks on the Indian Parliament and in Madrid, London, Chechnya, Jammu and Kashmir,

Bali and Mumbai has erected new walls. The walls built are not physical walls but a reflection of mind-walls. It is imperative to pull down these mind-walls in order to build a harmonious world.

Second, in re-building international institutions we need to be guided by an Idealism that accords each nation-state a place under the new sun commensurate with its political and economic strength. This is best expressed by Nagarjuna, the Hindi poet, when he sings:

नये गगन में नया सूर्य तो चमक रहा है,
ये विशाल भूखंड आज तो दमक रहा है,
मेरी भी आभा है उसमें ।

The sun that is shinning on the new sky,
The earth that has acquired the fresh glow,
Contains my light as well,

IV

The Path Ahead

Although civilizations, like other human creations, are mortal, they also evolve, survive and adapt through re-shaping their enduring ideas and values. The four prominent civilizations which embrace an overwhelmingly large segment of the global population are: Indian or Indic, Chinese, Islamic, and Western. The *Bahudhā* approach of 'one truth, many interpretations' has been an important feature of the higher forms of every civilization.

Human nature will continue to be a balance of opposites: love and hatred, peace and violence, truth and falsehood, unselfishness and self-centredness, saintliness and sinfulness, and the spiritual and the physical. In fact, these opposite traits are closely connected to one another. The greatness of the human mind lies in building a system that is inclusive and judicious and one that ensures dialogue among persons, groups and nations. Towards this end, religion and spirituality, education and culture, and global political and economic institutions have major roles to play.

In a world of different civilizations each will have to learn to co-exist with the others. What ultimately counts for many people is not political ideology or economic interest. Faith and family, blood and belief, are what people identify with and what they will fight and die for. The question is: Should we allow the clash of civilizations to replace the Cold War as the central phenomenon of global politics?

While fundamentalist religious forces are likely to continue to dominate political discourse for some time to come, it is not likely to be a permanent feature of the world social and political order. Fundamentalism cannot satisfy growing human aspirations or meet the challenges of modernization. Thus, the present hold of extremist organizations over its followers in the Islamic world and elsewhere should gradually loosen and eventually recede.

My sense of optimism and confidence that nation-states would cooperate in elimination of terrorist violence make me believe that the menace of terrorism in its present form would become a thing of the past in the coming decades. But this is not inevitable. The state-system, civil society organizations and concerned citizens have to take stronger action against terrorism. As I look into the future, other challenges - of removal of poverty, disease, illiteracy and inequality - will, however, persist in the 21st century.

The movements towards democracy, religious harmony, and good education need not be viewed as separate ideals or goals; these are interrelated. Creative minds, civil society institutions, and the global political architecture need to have a unity of purpose. The future of harmonious living demands sharing of a perspective that accommodates different points of view and respect for the ideals of *Bahudhā*.

Simultaneously, we have to discard the ideas like ‘my god is superior to yours’, ‘teaching hatred can secure national integrity’, ‘using terrorist groups in pursuit of national goals’ and dismantle infrastructure that ‘breeds hatred and imparts training for terrorist acts’.

Amidst all this, our task is to move collectively as human beings towards peaceful and harmonious living that demands both rationality and love. On our generation rests the responsibility to provide these elements.

There are enormous challenges in removing poverty and building an equitable social order. Fear of violence, terrorism, and the revival of the balance of power philosophy that caused conflicts and wars in the past, persist. I believe that civilizations do not clash, savagery does. Viciousness, duplicity and lack of trust can only be addressed through a dialogic approach and by cultivating an attitude of mind that embraces both listening and recognition of truths other than one’s own.

In our current global society, it is no longer possible to lead an isolated life. People of different faiths and belief live together. It is, therefore, necessary to understand each other’s needs, aspirations, faiths, and belief practices. We have to learn to live together in

concord in spite of traditional differences of religion, civilization, nationality, class, and race. To accomplish this, we have to know each other, which include knowing each other's past. We must learn to recognize and, as far as possible, understand the different cultural configurations in which human nature has expressed itself through indifferent religions, civilizations and nationalities.

Should we not make *Bahudhā* a global creative venture - a cornerstone of liberal democracy and a plural world? Such questions need to be asked and answered. It is no surprise to me that I found the best answers in age-old knowledge systems, because people of goodwill have invested intellectual and spiritual energies in constructing them throughout history, both in India but in other parts of the world as well.

At the End

The study of society and the behaviour of people has always fascinated me. I am aware that both peace and conflict characterize humanity and also the fact that ideas do influence the course of history. My approach to history and politics is based on my deep optimism that the world must and could be improved.

The commitment of people to the idea of peace and the concept of concord is the pre-requisite for achieving harmonious society. The renowned German philosopher Immanuel Kant (1724-1804) wrote in 1795 essay *Perpetual Peace* that we have to work for avoiding 'a war of extermination' and for establishment of 'a state of peace'. He opined that social harmony would emerge either by human insight or by conflict of a catastrophe of magnitude that would give humanity no other choice. In other words, at this time in our history we have to choose between 'clash of civilizations' and '*Bahudhā*'. The choice is ours.

WAYS TO ACHIEVE THE GOALS OF EDUCATION:
INSIGHTS FROM NEUROSCIENCE, PSYCHOLOGY,
AND TEACHING

ADELE DIAMOND
*Canada Research Chair
University of British Columbia*

In this paper, I consider how to further the goals of education, draw out explicit implications of that for teaching, and end with the relevance of this for educating gifted children. I will emphasize the fundamental importance of learning by doing, that teachers' humanity is far more important than their knowledge or skills, that what gets rewarded is what will get emphasized, and the critical role of attitudes. I will discuss why it is so critical to address the whole child and the tremendous value of the arts in doing that. To understand how to further the goals of education, we must identify what those goals are. Therefore I start there.

THE GOALS OF EDUCATION

What is, or should be, the goal education?

Intellectual skills, habits and skills of the mind, such as being able to think clearly, critically, and creatively, are part of the goal of education. Under this heading I would put skills such as

- being able to concentrate and focus, and being able to sustain that
- being able to creatively problem-solve and 'think outside the box'
- being able to reason logically and clearly
- being able to think critically and to show good judgment so that one can detect flaws or inconsistencies in an argument or line of reasoning
- to be always trying to deepen and enrich one's understanding
- being able to admit when one is wrong and to learn from one's mistakes

- being able to recognize when change is needed and to have the flexibility to change courses if needed
- to try to be open to what is, instead of pre-judging, and to question rather than to blindly accept what one is told

What we want *most* for our children is that they should be good human beings. As educators we *must* be concerned with this rather than simply being concerned with intellectual prowess alone. For, as Martin Luther King pointed out, an education that only teaches intellectual skills “may prove the greatest menace to society. The most dangerous criminal may be the man gifted with reason, but with no morals” (1947: 10).

Thus I propose that another part of the goal of education must be to educate the heart. Under this heading I would put cultivating qualities or attributes such as:

- caring, compassion, and kindness
- to feel a commitment and responsibility to help others, a sense of social or communal responsibility, rather than being focused on narrow self-interest
- to have a generous spirit
- to readily forgive and not hold a grudge
- to always be inclined to give someone the benefit of the doubt
- to be able to laugh at oneself and not take oneself too seriously
- humility and modesty
- to be courteous and respectful
- to have the strength of character to do what is right even if it is unpopular, inconvenient, no one is looking, or you might pay a high price for it
- to respect others and be accepting of differences
- to be honest and truthful
- to have a sense of fairness and justice

People from southern parts of Africa might call the sum of these qualities ‘ubuntu’ and a Jew might call someone with these qualities a ‘mensch.’ *Ubuntu* means being a human being, the essence of being a human being, having humanity. Zimbabwe’s Stanlake Samkange (1980) explains it thusly: “To be human [to have *ubuntu*] is to affirm one’s humanity by recognizing the humanity of others and, on that basis, establish respectful human relations with them.”

There is a third part to the goal of education, I propose, which includes those qualities that do not fit easily under 'the head' or 'the heart.' These include:

- to have self-confidence, a can-do attitude, and self-respect
- to have discipline, perseverance, and motivation so that one stays the course and finishes one's task; even when the going gets rough; even in the face of setbacks and discouragement, one does not give up
- to have resilience and endurance in the face of adversity
- to have the self-control and self-discipline to not give in to temptations, the heat of the moment, or unconsidered remarks
- to retain a sense of wonder and awe, an appreciation of the magic of life
- to retain one's native curiosity and excitement about learning
- to have a sense of humor
- to have optimism
- to be open to possibility

A Prayer for Twenty-First Century Children

Marian Wright Edelman

...Help us to not raise a new generation of children

With high intellectual quotients and low caring and compassion quotients

With highly developed computer skills but poorly developed consciences

With mounds of disconnected and unsynthesized information without a moral context to determine its worth

With more and more knowledge and less and less imagination and appreciation for the magic of life that cannot be quantified or computerized

With more and more worldliness and less and less wonder and awe for the sacred and everyday miracles of life.

...Help us to raise children who care.

Excerpted from *The Sea Is So Wide and My Boat Is So Small* by Marian Wright Edelman (Hyperion, 2008)

THE MEANS BY WHICH TO ACHIEVE THOSE GOALS

How are schools to achieve these goals?

The Importance of Action for Learning

The foremost means to educate is through doing, through hands-on, problem-based learning. There are many reasons why action is so critical to learning. I will mention a few.

1. We evolved to learn to further some purpose we set for ourselves, to help us do what we want to do. We pay attention to information, and learn it when we need it. We need it when it is important for what we want to do. If information is not relevant for action, we do not pay attention in the same way. We learn something when we need it for something we want to do (Olson, 1964). My son shows me how to program the VCR and I think I understand. When I go to program the VCR, I realize I have not really understood at all. The same applies when we teach children in school. In the course of whatever it is they are doing—writing a paper, building a tower, drawing a map, or building an integrated circuit—they will need certain information. They will want to learn it then and they will understand it quicker and in far greater depth than if it is just taught didactically in the abstract. Listen as a high school teacher of the type of salsa dance known as *Rueda* explains:

In *Rueda* instruction there is no need to call attention to individual errors. For example, on Day 1 when students are learning ‘*guapea*’ footwork, they are encouraged to shift their weight. However, the group’s progress is not delayed to make sure all students are doing the weight shift properly. Students with problems shifting their weight (and therefore often rhythm problems) discover, when dancing in the circle with others, that weight shift and rhythm are necessary for them to keep their place and to be where they are supposed to be. Technique is understood intuitively by the body; it is necessary for functionality. (Sam Gill, 2009)

If I asked you who would learn and remember a route better—the driver or the passenger in the car, you would immediately know it is the driver, and you would know why, because the driver has to actively use the information while the passenger just passively sits in the car. Much psychological research has demonstrated this principle and ancient traditions have long known it (e.g., Olson, 1964). We seem to forget

this when it comes to schooling, however, for we tend to have students passively sitting and listening with only the teacher active in the front of the room.

a Chinese proverb:

I hear, and I forget.

I see, and I remember.

I do, and I understand.

2. “The act teaches us the meaning of the act” (Abraham Heschel). This has several meanings. One is that one can *only* really learn something through doing or experiencing it. I can try to explain to someone who has never experienced it what it is like to ride a bike or fall in love. But, you can never really understand these until you have experienced them. The Dalai Lama has said that if you want to be happy, you should practice compassion toward others. I submit that that statement is utterly incomprehensible unless you have experienced the joy that comes from giving others joy or easing their pain.

Another meaning is that to do something well, you need to give it your full, undivided attention, so even if you are doing it for less than noble motivations, the act “can purify the intention” (Heschel). For example, suppose a musician is only playing a concert for the money. During the concert she cannot play well, however, if her mind is elsewhere thinking about the money; she must be fully in the moment, fully focused on the music.

3. *If students act as if they are good; they will become good.* William James (1884) and Carl Lange (1887) independently developed theories of emotion that were later combined and became known as the James-Lange theory of emotion. “Common sense says, we lose our fortune, are sorry and weep; we meet a bear, are frightened and run; we are insulted by a rival, are angry and strike... [T]his order of sequence is incorrect,” wrote William James. His argument was that we do not flee from a bear because we are afraid; instead our first reaction is to flee and then we try to make sense of that (why did I do that?) and conclude it must have been because we were afraid.

Prefrontal cortex (to which I have devoted my life’s work) is over-rated. It is true that to learn something new, we need prefrontal cortex. Thus, among novices, those who recruit prefrontal cortex most, usually perform best. However, when we become familiar with something and get good at it, usually we are *not* recruiting prefrontal cortex. After

something is no longer new, those who recruit prefrontal cortex *least* usually perform best. Why? Prefrontal cortex is the evolutionarily newest region of the brain. Other brain regions have existed for 100s of 1,000s of more years of evolutionary time and so have had far longer to perfect their functioning. They can subserve task performance ever so much more efficiently than can prefrontal cortex. Thus, I need prefrontal cortex to learn a new dance step, but later if I try to think about what my feet are doing while dancing, I will not dance well. Similarly, children need prefrontal cortex to learn what sound goes with what letter, but when a fifth-grader reads, we no longer want the child to be thinking about letter-sound mapping; we want that to have become automatic. A child may know intellectually (at the level of prefrontal cortex) that he should not hit another child or grab another child's toy, but in the heat of the moment if that knowledge has not become automatic (passed on from prefrontal cortex to subcortical regions) the child will do exactly what he should not do (and exactly what, if you asked him, he knows he should not do).

The only way something becomes automatic (becomes passed off from prefrontal cortex) is through action, repeated action. Nothing else will do. An adult could lecture to the child until he or she is blue in the face. William James (1899) spoke at length about this over 100 years ago:

[We] talk of the smoking-habit and ...the drinking-habit, but not of the ...moderation-habit or the courage-habit. But the fact is that *our virtues are habits as much as our vices. Our nervous systems have grown to the way in which they have been exercised, just as a sheet of paper or a coat, once creased or folded, tends to fall forever afterward into the same identical folds.*

[W]e do a thing with difficulty the first time, but soon do it more and more easily, and finally, with sufficient practice, do it semi-mechanically, or with hardly any consciousness at all....The great thing in all education is to make our nervous system our ally....[N]o matter how good one's sentiments may be, if one has not taken advantage of every concrete opportunity to act, one's character may remain entirely unaffected for the better....A tendency to act only becomes effectively ingrained in us in proportion to the uninterrupted frequency with which the actions actually occur, and the brain 'grows' to their use.

Don't preach too much to your pupils....Lie in wait rather for the practical opportunities, be prompt to seize those as they pass, and thus at one operation get your pupils both to think, to feel, and to

do....Preaching and talking too soon become an ineffectual bore.
(emphases added)

We are what we repeatedly do. Excellence, then, is not an act, but a habit.

We do not act rightly because we have virtue or excellence, but we rather have these because we have acted rightly; 'these virtues are formed in man by his doing the actions'; we are what we repeatedly do. (Aristotle, *Ethica Nicomachea*, 4th century BC)

Durkheim went even further when he sagely observed back in 1897 that *the power of words or the best-reasoned, logical arguments to educate, persuade, or change minds is overrated:*

Knowledge is not sought as a means to destroy accepted opinions but because their destruction has commenced.... [Logical arguments] would be ineffective if these sentiments still possessed vitality; or rather, would not even take place. Faith is not uprooted by dialectic proof; it must already be deeply shaken by other causes to be unable to withstand the shock of argument. It is certainly not the learning he acquires that disorganizes religion; but the desire for knowledge wakens because religion becomes disorganized.

What are the practical implications of this for teachers? To understand the deep truth of "if *you* want to be happy, practice compassion," students need to practice compassion and experience for themselves the joy it brings them. If we want to produce compassionate students, we need to have our students practice compassion day in and day out, throughout every day. The way to improve compassion is to practice it. Repeated practice is the way to make compassion a 'habit,' second nature, a part of the fabric of who we are. Thus, I recommend giving students the assignment of doing three acts of kindness each and every day. They can be quite small and simple such as a smile or a kind word. Examples could be saying thank-you to the bus driver or the person handing you your lunch, holding the door for someone, helping someone carry a load, giving a compliment ('great smile' or 'I like your shirt'), offering your seat to an older person, sharing a treat with someone, comforting someone who is upset, inviting someone on the sidelines to join in a game, letting someone else go first or play with the toy you wanted, or helping to clean up.

How does this apply to cognitive skills? I have studied an early childhood program called *Tools of the Mind* that emphasizes the development of the cognitive control skills dependent on prefrontal cortex called “executive functions” (Diamond et al., 2007). Elena Bodrova and Deborah Leong (2007), who developed the educational program, initially tried it as an add-on to existing curricula. For example, from 10-11:00 am, children might do *Tools of the Mind* activities. Children improved on what they practiced in those modules, but it did not generalize. It did not generalize to other contexts or other executive function skills. For benefits to generalize to other contexts and other executive function skills, supports for, training in, and challenges to executive functions had to be part and parcel of what the children did all day long. The children’s actions throughout the day had to be exercising executive functions to really see a benefit. Thus, Drs. Bodrova and Leong embedded aspects of executive function training in academic activities such as literacy and math, as well as having activities whose primary focus was to improve executive functions.

A *Tools of the Mind* literacy activity with an embedded executive-function component is *Buddy Reading*. Children of 4 or 5 years each select a book, get into pairs, and take turns ‘reading’ the story in their picture books. With each child eager to tell his or her story, no one wants to listen. To help them succeed at exercising inhibitory control (one of the executive functions), the teacher gives one child a drawing of lips and the other a drawing of an ear, explaining, “Ears don’t talk; ears listen.” With the concrete, visible reminders, the child with the ear is able to inhibit talking, wait his or her turn, and listen. Otherwise the child would not be able to do that. Children then trade drawings and roles, learning the social norms of turn-taking and waiting one’s turn. After a few months, the pictures are no longer needed; the children have internalized the instructions and are able to listen and wait their turn without the visible reminders.

An example of a *Tools of the Mind* activity where executive-function development is the primary focus is social pretend play (such as playing doctor and patient or grocery store). Mature make-believe play challenges and helps build all three core executive functions: Children must (a) *inhibit* acting out of character (someone who has chosen the role of the ‘baby’ in a scenario cannot all of a sudden get up and drive the car), (b) *hold in mind* their role and those of others (when planning a robbery, you do not want to accidentally inform the policeman; you must remember who has which role), and (c) *flexibly*

adjust in real-time as their friends take the play scenario in directions they never imagined.

A core aspect of *Tools of the Mind* is that minimal time should be devoted to ‘large group activities’ (where the teacher is talking and the children are gathered as a group, passively listening). Rather, *Tools of the Mind* emphasizes learning through doing, having children actively involved in using the information and actively interacting with other children in doing that in groups of 2, 3, or 4.

Scaffolds, such as the simple line drawing for *Budding Reading*, enable children to practice skills they would not otherwise be able to practice. If a teacher assumes that children are not capable of something and so structures the class so that the children never need to do that, they will not get any better at that because they are not getting an opportunity to practice. If a teacher, with the same assumption, scaffolds or supports the children to help them perform at a level they could never perform at on their own, then they get practice (and the pride of doing something that may have seemed far beyond their reach) and through repeated practice, they improve.

I used to think drills a waste of time, but I was wrong. Repeated practice is the only way to move things from prefrontal cortex to older brain regions. No one learns to play a musical instrument well without hours and hours of practice. No one becomes a chess master without hours of practice. Schoolchildren need hours and hours of practice so that simple sums and multiplication become second nature, so the skills of reading become automatic, and so that skills of attention, concentration, self-control, and memory become finely honed.

Activities that address all three components of what I have laid out as the goal of education are *service activities*, activities where one is working to help one’s own community or people further afield. These are acts of caring and generosity, but they also require forethought and planning, perseverance even in the face of initial setbacks, creativity and flexibility when unexpected obstacles or opportunities arise, and putting into use what one has learned in school. It could be raising funds for an important cause, such as the *Pennies for Peace* program that grew out of Greg Mortensen’s work portrayed in the book, *Three Cups of Tea*. One penny at a time, schoolchildren (grades K to 12) throughout the West are raising funds to build schools in remote areas of Afghanistan and Pakistan. While a penny is practically worthless in the West, in impoverished communities it can buy a pencil and open the door to literacy. “Kids are really connecting to the idea that there are kids that don’t have a school or don’t have a choice about getting an

education” (Bouthillette, 2010). Children realize they are part of something bigger than themselves that is having a major positive impact. “No other factor even comes close to matching the cascade of positive changes triggered by teaching a single girl how to read and write” (www.penniesforpeace.org). Here, another example:

In many of [our] school, we found that our own SOS children from the SOS Children’s Villages performed poorly compared to their classmates as they appeared unable to overcome their history of abandonment, trauma or abuse, poverty and previously inadequate care, even though they now lived in a nurturing environment in our SOS Children’s Villages. The SOS President, Mr. Helmut Kutin, believed that it was possible to reverse this trend...Twenty years later, we have graduated over a 1000 students both SOS and non-SOS who have since studied in all the best universities. What [we] sought to achieve was for the students to know that they have a mission beyond academic success and that their talents and skills could serve both Africa and the wider world; the service element of our programme was a key element in this process...All students committed themselves to community service projects on a weekly basis...This commitment continues after school and university and there are many projects begun by our alumni including providing incubators for a major teaching hospital, funding of a nurses training school in Ethiopia, [and] paying the bills of indigent mothers in maternity wards in Accra...Perhaps this is also [a] way to tap into the idealism and activism that youth thrives on—they seem to benefit from the sheer happiness of giving something back to society...and I think they need to be given the opportunity for that kind of self-growth. (Margaret Nkrumah, 2010)

The Critical Role of Who the Teacher is as a Human Being and, Not What he or she does, but How he or she does it

Children learn what they live. The teacher’s humanity is more important than the teacher’s knowledge of content or teaching strategies. A teacher’s presence is the loudest lesson children hear. A teacher’s actions speak louder than his or her words. What you say has less of an impact than what you do. Also, children learn from role models. Teachers can provide role models of the qualities I take to be the goal of education. If we preach those but do not practice them, our words will have little effect. If we want kind and considerate children, we need to give them kind and considerate role models and we need to give them boundless opportunities to practice kindness.

What are the practical implications of this for teachers? For example, how can a teacher communicate concern or caring? If we want our students to know we value them, if we want to model caring, how might we go about that? We can take the time to listen, really listen, with our whole being:

[T]he 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. And especially if it's given from the heart. When people are talking, there's no need to do anything but receive them. Just take them in. Listen to what they're saying. Care about it. Most times caring about it is even more important than understanding it.

We connect through listening. When we interrupt what someone is saying to let them know that we understand, we move the focus of attention to ourselves. When we listen, they know we care.... I thought people listened only because they were too timid to speak or did not know the answer. A loving silence often has far more power to heal and to connect than the most well intentioned words. (Rachel Naomi Remen, *My Grandfather's Blessings*, 2000)

Listening is the oldest and perhaps the most powerful tool of healing. It is often through the quality of our listening and not the wisdom of our words that we are able to effect the most profound healing. (Rachel Naomi Remen, *Kitchen Table Wisdom*, 1996)

The principal form that love takes is giving of your time, and truly listening. When something is of value to us we spend time with it. When we love our children, we give them our time.... True listening, total concentration on the other, is always a manifestation of love.... Your willingness to listen is the best possible concrete evidence of your esteem that you can give your child. There is no better and ultimately no other way to teach your children that they are valuable people than by valuing them....When children know that they are valued, they feel valuable....That knowledge is worth more than any gold.....This feeling of being valuable is the cornerstone of discipline because when one considers oneself valuable one will take care of oneself in all ways that are necessary. Self-discipline is self-caring. (Scott Peck, *The Road Less Traveled*)

If we want teachers to model caring behavior for our children, we must address and reduce teachers' stress, and we must not make them feel so pressed for time that they cannot take the time to be with a student as they would like and as children need. If we want teachers who can care

for our children, it is important that teachers also receive caring and support. An example of a program that addresses this need is the *CARE for Teachers* program (Jennings, *in press*), which trains teachers in techniques such as mindfulness to help them reduce stress, feel calmer, and in general have a better sense of well-being. Along with that improved inner strength comes feeling more open, more aware of and sensitive to the needs of others, and more emotionally responsive. This markedly changes the climate in the classroom, bringing more joy into the classroom and into teachers' lives. *Tools of the Mind* uses a different strategy to reduce stress. Because children in *Tools of the Mind* exercise better executive functions (including better self-control), teachers do not have to worry about things getting out of control; they can relax. Without having to worry about being reprimanded by the teacher for misbehaving, the children can relax. There is palpably more calm, and more joy, in a *Tools of the Mind* classroom.

How can a teacher communicate respect for his or her students? If we want children who are self-confident, what can a teacher do to foster that self-confidence? Pride and self-confidence come from seeing yourself succeed at something that you thought difficult. Teachers need to provide the opportunities for children to do things that enable children to believe in themselves, i.e., *do-able challenges*. It is useless to tell a child that you believe in him or that he should have self-confidence in the absence of providing opportunities for him to see *for himself* that you believe in him enough to let him try something that is truly a challenge and to see for himself that he can succeed. Children gain pride and confidence, not by our letting them get away easily, but by holding them to high do-able standards, perhaps standards that we provide scaffolds for to help them succeed initially. See Kenneth Clark below and the writings of Robert White (1959), M. Brewster Smith (2003), and Mihaly Csikszentmihalyi (1991). To return to the *Buddy Reading* example in *Tools of the Mind*, instead of the embarrassment of not being able to enact the listener role, a simple line drawing of an ear enables children to have the pride of being a good listener. Rather than letting children flounder and experience failure and criticism, *Tools of the Mind* teachers provide scaffolds so that each child, whatever his or her level of ability, is able to succeed. The boost to self-confidence and self-esteem from experiencing success may be key to the success of *Tools of the Mind*.

[My teachers]...demonstrated their respect for your humanity by holding you to standards.... [A] child needs to sense from his teachers that they respect him as a person. And the only way he can

see that is through his accomplishments and through teachers providing the parameters for accomplishment. (Kenneth Clark)

One way to help students feel that ‘they own’ an understanding, to have the pride that they achieved it through their own efforts, instead of just receiving it handed down from the teacher, is to *not* perfectly tie up all the loose-ends in a lecture, leave some ends dangling unfinished. If we leave things a little unfinished for students to ponder and complete themselves, not only does that keep students thinking about the lecture longer (the Zeigarnik effect; Baddeley, 1976; Zeigarnik, 1967), but it gives them the opportunity to make their own discoveries. The pride, self-confidence, and excitement that comes from discovering for themselves, from figuring things out for themselves, is priceless.

We also help students develop self-confidence through our expectations of them. If we communicate through our actions, through our demeanor, and yes, even through our words, that we have confidence in a student, that goes a long way toward helping the student have confidence in herself. How do we know if we are bright or capable? In part it is through seeing our performance and in part it is through how we think others see us (Mead; Cooley). “If my teachers think I can do this, then maybe I can.” Not only that, but our expectations have a powerful effect on how a student actually performs, so our expectations affect (a) a student’s self-perception, self-confidence, and expectations for him- or herself, and (b) the student’s performance, which the student then looks at for behavioral evidence, which helps shape his or her self-perception and expectations for the future. *Expect a student to perform well; and the student will perform well.* The classic, though partially flawed study, *Pygmalion in the Classroom* (Rosenthal & Jacobsen, 1968), showed this in a very powerful way.

For our study of *Tools of the Mind* reported in *Science* (Diamond et al., 2007), our testers were not supposed to know which program a child was from. However, our testers reported back that they could always tell which children had been in *Tools of the Mind* because when it came to the most difficult test conditions, control children tended to give up, but *Tools of the Mind* children kept saying, “I know I can do this.” Where does the attitude, the confidence, that if you persist, if you vary your strategy or try harder, you’ll succeed come from?

Tools of the Mind teachers make mistakes on purpose in class and talk about what you can learn from that mistake. They are taught to do

this on purpose so they can model not being embarrassed by one's errors. *Tools of the Mind* teachers have weekly learning conferences where teacher and child evaluate the child's work together. They discuss effort: How many times did you try? What did you do when you tried? The teacher helps the child set an attainable and measurable goal. 'Doing my best' would not be a measurable goal, but writing one more sentence or remembering one more fact would be. A child can then evaluate progress toward that goal the following week. The conferences have an upbeat, positive tone; they establish that you use your errors to learn from; they are valuable. That the child will succeed is never in doubt, it's just a matter of how and when.

To an educator who might be feeling, "Geez, there are so many ways I can mess up," my advice is not to worry, relax. As long as what you are doing is coming from the right place, from genuine love and respect for your students, pretty much whatever you do will work out for the best. Do not sweat the specifics.

The Critical Role of What gets Rewarded and what the Society at Large Values

Children see who people look up to. They see who gets praised and held up as role models. If we want children to grow up to be compassionate and civic-minded, they need to see concretely that that is valued. We give awards for the Best Scholar and the Best Athlete, but too rarely for the Most Selfless Student. They see teachers getting evaluated by the academic test scores of their students, not by the humanity or kindness of their students. We need to regularly recognize students for doing good deeds, for taking the initiative to help at a local or global level. We need to regularly recognize school personnel (*all* school personnel, including the janitor, cook, librarian, etc.) for best personifying the human values we aspire to inculcate in our students. It is not that one should do the right thing *in order* to get a reward, or that every good deed should get rewarded, but students should see very concretely that it is at least as important to be a good person as it is to be bright or athletic.

The Critical Role of Attitudes

I touched on this briefly above when I spoke about expectations and self-confidence. I would like to touch on attitudes in a few different ways here. The one most related to what I spoke about above is one's attitude toward mistakes. Mistakes can be feared as the source of intense embarrassment and as evidence of one's inability to succeed,

evidence of one's insufficiencies. The best way to avoid mistakes, disconfirmed hypotheses, and poor grades is to stick with what you already know. Venture at all into the unknown and you risk making a mistake. Indeed, Einstein famously said, "Anyone who has never made a mistake, has never tried anything new." The only way to grow and progress, however, is to venture beyond what you already know. Therefore it is terribly important to inculcate in students the attitude that it is okay to be wrong and, indeed, everyone messes up sometime. Indeed, the wonderful thing about a disconfirmed hypothesis is that you learn something new. Confirmation of your hypothesis only tells you you were right. It is only when you are surprised that you learn something you did not already know.

A poor grade, a wrong answer, can be the occasion to give up, or to try harder, try a different strategy, or ask for help. Samuel Massie was born in Little Rock, AR in 1919, the grandson of slaves. One can only imagine that he encountered his share of prejudice and setbacks. Yet he persevered and in 1966 he became the first African-American professor at the US Naval Academy. He was named one of the best chemistry professors in the US and one of the 75 premier chemists of the twentieth century, along with Marie Curie, James Watson, and Francis Crick. In 2002 the US Dept. of Energy chose to name its Chairs of Excellence in the environmental sciences in his honor. Samuel Massie's attitude toward mistakes was, "You've never failed until you've tried for the last time, and you've never lost until you quit." What a wonderful attitude to aspire for all our students to have.

If you think that ability is the primary determinant of how well a person will do, and that ability is genetically determined, then if you get a poor grade, that indicates you lack the ability and you might as well give up. If, however, you think that hard work and effort are primary determinants of grades, then a poor grade is merely an indication that you need to work harder or try a different strategy. Students with that attitude would be inclined to persist in the face of failure and to seek academic challenges to help them grow and improve (Dweck, 1999, 2006).

The truth is that evidence indicates that *IQ (i.e., ability) is over-rated*. Discipline appears to account for over twice as much variance in final grades as does IQ (Duckworth & Seligman, 2005). Indeed, Côté & Levine (2000) found that IQ did not predict academic success at all in university students. Similarly in young children, executive functions (especially self-control) are more strongly associated with school

readiness and school success than are IQ or entry-level reading or math (Blair & Razza, 2007).

A second attitude is related to the importance of learning through doing, the importance of letting students discover things for themselves, and my injunction to teachers to relax. Our powers are limited and in the end, students need to own the knowledge themselves. We can try to help, but when all is said and done, it is the students' work; we are only helpers.

No gardener ever made a rose. When its needs are met a rosebush will make roses. Gardeners collaborate and provide conditions which favor this outcome. And as anyone who has ever pruned a rosebush knows, life flows through every rosebush in a slightly different way. (Rachel Naomi Remen)

The next quote is about therapy, but it applies equally well to education:

Therapists' work is more like that of a mid-wife....When the baby is born, there is no question to whom it belongs....Lao Tzu says that when the sage is at work, people will say 'they did it themselves.' This is empowerment (Johanson & Kurtz, 1991: 29, 38-39).

Our first reaction when a child is not grasping a concept or new skill is usually to think it is the child's deficiency. "If only the child were brighter, she would have grasped what I am trying to teach." It is critical that we never forget our own role in the learning process and that different people learn in different ways. When a child cannot succeed on one of my executive function measures, I always ask, "How can I present the material differently so he or she can succeed?" Not surprisingly, I usually find a way so the child can succeed, even occasionally halving the age when success is first seen (e.g., Diamond, Churchland, Cruess, & Kirkham, 1999; Diamond, Kirkham, & Amso, 2002). A shift of perspective can be helpful in teaching. If a child isn't getting something, what might I, as the teacher, do differently? How can I present the material differently, or word the question differently, so that this child can succeed?

The motto of a local school for children with dyslexia and other learning challenges is, "If you can't learn the way we teach, we will teach the way you learn.

Prefrontal cortex makes it possible for us to selectively attend, being on the lookout for the information we think relevant and important and able to inhibit distraction. However, when we are selectively attending for one thing, we may well miss critical information because we were looking for something else. “Our notions of what *should* happen [can] block us from seeing what actually *does* happen” (Bernie Glassman, *Bearing Witness*). What we are looking for in part determines what we will see. Therefore, an attitude of openness, of non-expectation as much as possible, of willingness to seize on serendipity is very important. For example:

A friend’s son was in the first grade at school, and his teacher asked the class, “What is the color of apples?” Most of the children answered red. A few said green. Kevin, my friend’s son, raised his hand and said white. The teacher tried to explain that apples could be red, green, or sometimes golden, but never white. Kevin was quite insistent and finally said, “Look inside.”

For the last two attitudes I will address, I would like to focus on ones that relate to compassion and to humility. It is to drop all arrogance about how wonderful we are because of our accomplishments. No one accomplishes anything by his or her own efforts alone. We have people helping and supporting us, in looking up facts, in cheering us on, in cooking our meals, in short, in a myriad of ways. “None of us has gotten where we are solely by pulling ourselves up from our own bootstraps. We got here because somebody—a parent, a teacher, an Ivy League crony or a few nuns—bent down and helped us pick up our boots” (Thurgood Marshall). Even more important, in my mind, is to appreciate the role of luck. Sure I work hard, but others might not look favorably on my work just because of the zeitgeist, my experiments though well planned could come up with null results, etc. Everything I have and have achieved is a *gift*. It is not that I would have received the gifts had I not tried and worked hard, but my efforts could just as easily not have borne fruit. That they bore fruit is a gift for which I am deeply grateful. Where did new, creative ideas I came up with come from? Moreover, each of us is lucky in so much more....

...that when we got sick, we got better.

...that when we fell, we did not hurt ourselves more.

...that when we walked in front of a car or took our eye off the road while driving, we weren’t killed.

- ...that others have forgiven our slips of word or deed.
- ...that when we were down and out, someone showed us kindness.
- ...that when we made something, the pieces fit together.
- ...to have seen so much in our lives, even if we never moved.
- ...that our work has sometimes met with favor in the eyes of others.
- ...that when we thought we could not go on any further, we found the strength to continue.

If we are ever mindful of this, it makes it less easy to be condescending toward others. Are we really so much better? And, it helps us remember that “there but for fortune go I.” Those of us who are lucky enough to have should share our good fortune with those less fortunate. Those of us lucky enough to grasp a concept or learn a new skill should help those who are still trying to master it. Our luck could turn. One day we may be the one who isn’t grasping what someone is trying to tell us or who is ‘down on our luck.’ and then we would welcome a helping hand, a compassionate soul. Also, remembering all the many things you have to be grateful for, makes it less likely you will feel deprived and wish others’ unhappiness because you are unhappy yourself. Instead, remembering all the things to be grateful for helps cultivate a generous spirit.

It is also easier to have a generous spirit and to be forgiving if we bear in mind that mean, hurtful behavior often comes from hurt, sometimes very deep, grievous hurt. Harry Stack Sullivan (1953) talked about the ‘malevolent transformation.’ This occurs when a child allows himself to be open and vulnerable (as children often are) and is met with rejection, perhaps ridicule, and perhaps worse. Early hurt brings the expectation of future hurt, and so the child hardens himself and decides to push others away before they have a chance to push him away. He now appears to be absolutely awful (mean, obnoxious, uncaring), but that is not coming from being a bad person, but from having been so very deeply hurt.

The developmental course changes....The child learns, you see, that it is highly disadvantageous to show any need for tenderness, in which case he shows something else; and that something else is the basic malevolent attitude, the attitude that one really lives among enemies....The juvenile makes it practically impossible for anyone to feel tenderly toward him or to treat him kindly; he beats them to it, so to speak. And this is the development of the earlier discovery that the manifestation of any need for tenderness [brings] anxiety or pain. (Harry Stack Sullivan, 1953)

Where Didactic Teaching can be of Great Value, but also a Word of Caution

Once students have had experience, an explicit, verbal teaching can be immensely effective in helping students reflect on their experience and see things they might have missed. I remember the first time I encountered Buddhist teachings on negative emotions. It made so much sense because I could immediately see the wisdom of it by reflecting on my experience. Who is the person harmed by a grudge? The primary victim is the holder of the grudge. That person is holding onto anger and resentment, tying himself up in a knot, while the intended target of the grudge is merrily going about his business. How dumb to punish oneself by holding a grudge. Let it go. We create enemies by treating others as enemies. Treat others with kindness and respect as friends, and you will make friends. To a large extent we create the world we live in.

The cautionary note can be illustrated by a bit of a problem with another Buddhist teaching. Many Buddhist teachings are centered around the curse of selfishness and how we should not have concern for our own happiness but only for the happiness of others, even be willing to take on their suffering and give them our happiness in exchange:

All the suffering in the world, comes from the desire for one's own happiness....

Exchanging self and others means switching these two so that instead of being primarily concerned about our own happiness we become more concerned for that of others, and instead of neglecting others we neglect ourselves and strive for enlightenment for their benefit....Eventually we'll feel compelled to take their suffering on ourselves and give them our happiness. This is what giving and taking means—giving happiness to all beings and taking on all their suffering—and we practice it in an attempt to destroy our self-cherished mind. (Geshe Jampa Tegchok, 2006)

That is a teaching from males probably intended primarily for males. Girls, at least in the West, are often brought up that they should be completely self-sacrificing, concerned only for the welfare of others and not for themselves (A. Balint, 1953; Chodorow; Gilligan, 1982). They need a different teaching, the teaching that they matter too.

The point of this example is meant to be more general than a gender difference. I am trying to illustrate that children are coming from

different starting points, especially children from different cultures, and the teachings that they need will vary. We need to be keen observers and listeners so that we can try tailor lessons to what children need to hear and improve on.

IMPORTANCE OF EDUCATING THE WHOLE CHILD:
COGNITIVE, EMOTIONAL, SOCIAL, AND PHYSICAL

We are not just intellects, we also have emotions, social needs, and bodies. The different parts of the human being (cognitive, emotional, social, and physical) are fundamentally interrelated. It follows that academic achievement, social emotional competence, and physical and mental health are fundamentally and multiply interrelated. I propose that programs that address the *whole child* (our cognitive, emotional, social, and physical needs) will be the most successful at improving any one of them. That is, if your goal is *only* to improve academic achievement, the best way to achieve that goal is *not* to focus narrowly on academics alone, but to address children's emotional, social, and physical development as well.

There are strong reciprocal relations between emotion and cognition, for example. More learning occurs in happy, joyous classrooms, where children feel safe, secure, and accepted, and where they feel the teacher sees them for who they really are and genuinely cares (Gregory & Weinstein, 2004; Harter, 1996; Roeser, Eccles, & Sameroff, 2000). Children can then dispense with the dual-task of always looking over their shoulder, of trying to contain their anxiety, anger, or hurt, while they are trying to learn. They can risk trying something new and maybe being wrong. Children need to feel safe enough to push the limits of what they know, to venture into the unknown, to risk looking foolish. Joy is not the opposite of serious. Serious learning can and does occur in joyful classrooms. Similarly, one does not need to be miserable in graduate school to be learning and benefiting from the education.

Think of how much more, and more quickly, anything is learned when you tap into something a student is passionate about. Emotions can be the engine to power great strides in learning.

On the other hand, even mild stress floods prefrontal cortex with dopamine and norepinephrine and impairs executive function performance (Arnsten, 1998; Cerqueira et al, 2007; Roth et al., 1988). It can make it almost impossible to concentrate, learn anything new, or exercise discipline or self-restraint. Stressed children are sometimes

reprimanded by teachers or parents for actions that are really stress reactions, rather than intentional misbehavior. They may very much want to behave properly, but are not able to do so. Such children can be misdiagnosed as having ADHD, when what they really have is stress. Reducing stress in the classroom not only reduces teacher burn-out and improves classroom climate, it also leads to better academic outcomes (Denham et al., 2010; Downer et al., 2010; Jennings & Greenberg, in press; Jethwani-Keyser, 2008).

Prefrontal cortex can be important in coping with stress, especially after things calm down a bit. Translating a stressful experience into language (talking or writing about it) alters the way it is represented and understood in our minds and in our brains. It increases prefrontal cortex activation which decreases the stress response in the amygdala, and eases our distress. Jamie Pennebaker (1990) has repeatedly shown that even if people just write about their problems (presumably less efficacious than talking about their problems to a sympathetic other), their psychological and physical health improves. Lieberman and colleagues (2007) have shown that just getting participants to assign a single-word label to the fear or anger displayed by another person, reduces amygdala activation and increases prefrontal cortex activation.

We are not just thinking and feeling beings, we are also social beings. Just as our brains work better when we are not feeling stressed, our brains work better when we are not feeling lonely or socially isolated—and that is particularly true of prefrontal cortex and executive functions. Feeling excluded or as if you do not belong has been scientifically shown to impair reasoning and decision-making, decrease persistence on difficult problems, and impair selective attention in the face of distraction (Baumeister, DeWall, Ciarocco, & Twenge, 2005; Cacioppo & Patrick, 2008; Twenge, Catanese, & Baumeister, 2002). In one study, Baumeister, Twenge, and Nuss, (2002) told a group of participants they'd have close relationships throughout their lives, told another group the opposite, and told yet another group unrelated bad news. On simple memorization problem that do not require executive functions, the groups performed comparably. On logical reasoning problems, however, where executive functions are required, participants told they'd be lonely performed significantly worse than the other two groups. Campbell and colleagues (2006) just asked people how they felt, they did not try to manipulate that. They found that prefrontal cortex worked less efficiently while people did mental math in those who felt lonely or isolated.

I am convinced that one of the reasons why you can see African children living in poverty and playing in the dirt of the streets with no toys still laughing joyfully, while their counterparts in the West who have every material comfort still seem unhappy and unfulfilled, is the strength of the community structure surrounding those African children..... [A] child is not the sole responsibility of his or her parents but of the community—all adults can and do reprimand or embrace that child; a funeral involves not only the whole extended family but work colleagues,...In other words, you are not alone and perhaps that is why even with seemingly nothing, joy is possible. (Margaret Nkrumah, 2010)

Ubuntu speaks particularly about the fact that you can't exist as a human being in isolation. It speaks about our interconnectedness. We think of ourselves far too frequently as just individuals, separated from one another (Desmond Tutu, 2008)

A traveler through our country would stop at a village and he didn't have to ask for food or for water. Once he stops, the people give him food, entertain him. That is one aspect of Ubuntu but it will have various aspects. Ubuntu does not mean that people should not enrich themselves. The question therefore is: Are you going to do so in order to enable the community around you to improve? (Nelson Mandela)

[C]hildren are never orphans since the roles of mother and father are by definition not vested in a single individual with respect to a single child. Furthermore, a man or a woman with [ubuntu] will never allow any child around him to be an orphan (Stanlake Samkange, 1980).

Just as our brains work better when we are not feeling stressed or lonely; our brains also work better when we get exercise and are physically fit, and this again is disproportionately true for prefrontal cortex and executive functions. Improved physical fitness robustly improves cognitive and brain function, with prefrontal cortex and executive functions showing the greatest benefits (Hillman, Erickson, & Kramer, 2008; Hillman et al., 2009). “[T]he positive effects of aerobic physical activity on cognition and brain function [are evident] at the molecular, cellular, systems, and behavioural levels” (Hillman et al., 2008: 58). “Physical activity-related modulation is disproportionately larger for task components that necessitate greater amounts of executive control” (Hillman et al., 2008: 61).

Intervention studies find that increased participation in physical activity leads to better cognitive skills and better grades. A large, 2-year physical-activity intervention with over 4,500 elementary-school

children produced significant improvements in children's math and also improvements in their reading scores (Hollar et al., 2010). Budde et al. (2008) found that among 13-16 year-olds randomly assigned to physical exercise or a control group, those in the exercise group improved more in selective attention and concentration (executive functions). Coe et al. (2006) found that among sixth-graders randomly assigned to condition, those who got enough exercise to meet at least some of the Healthy People 2010 guidelines for vigorous activity had higher grades than students who performed no vigorous activity. When the results from many studies were pooled in a meta-analysis, a positive clear relation between physical activity and both verbal skills and math emerged for all ages (4-18 years) and especially for those 13 years of age or younger (Sibley & Etnier, 2003).

There are only so many hours in the day, and teachers have so much academic content to cover, how can they possibly find time to also address social, emotional, and physical development in addition? It does not have to be in addition. All can be addressed at once. For example, instead of teaching high school physics by lecturing, what about having the class restore an old sports car? That requires that students apply principles of physics and so they have a good reason for learning those principles. Not only is it hands-on, it engages students' enthusiasm and emotions, it requires physical activity and not just mind work, and provides the experience of working collaboratively together toward a shared goal. This involves teaching students in a way they are motivated to learn. Imagine the excitement as they are working on the car, and imagine the beaming smiles of pride when they have finished.

Tools of the Mind activities also organically involve elements that address the various facets of human development. Many kindergarten programs treat social-emotional development (if at all) as separate from cognitive development; *Tools of the Mind*, however, is based on the teachings of Vygotsky (1967, 1978, 1987). Vygotsky emphasized that cognitive development occurs in the context of social development and that social interactions are key to developing intentional self-control. *Tools of the Mind* teachers are taught procedures for implementing paired activities and for creating a positive atmosphere of cooperation and friendship. Children in *Tools of the Mind* do a lot of activities with one or a small number of other children, and each week, every child is paired with every other for at least one activity, reducing social isolation and discouraging cliques.

Vygotsky (1978) observed that children's executive functions originate in social interactions and then later become internalized and

independently used. For example, children need to have an opportunity to engage in other-regulation—regulating another’s behavior and pointing out errors another person makes. (It is easier for any of us to see errors in another than in ourselves; developmentally children can detect others’ errors before their own.) ‘Other-regulation’ involves children acting both as subjects of other’s regulatory behaviors and as actors regulating others’ behavior. For example, in *Tools of the Mind* math activities children alternate roles as ‘doers’ and ‘checkers’ (visual symbols indicate who is the doer [a picture of a hand] and the checker [a picture of a checkmark]). In the Numerals Game, the doer has a number card and counts out that number of small teddy bears into a cup. The checker takes the bears and puts them on a checking sheet with the corresponding number of dots. If the bears cover the dots with no extra, the children know the doer was correct. By assuming these roles, children learn to monitor and evaluate the actions of their partner, eventually internalizing criteria and actions they will apply to their own work (Bodrova & Leong, 2007).

Tools of the Mind also embraces the importance of play as aiding academic goals. Schools are under great pressure to cut back on time for play to provide more time for academic instruction. However, children in *Tools of the Mind*, who have more time to play, improve more in executive functions (Diamond et al., 2007) and perform better on academic outcome measures (Barnett et al., 2008) than their peers who have more time in direct academic instruction. Similarly, findings from other programs persuaded the International Association for the Evaluation of Educational Achievement that “young children’s cognitive performance at 7 years of age was better for those children who had spent less time in whole-group activities and more time working or playing”. (Bracey et al., 2007). Play does not take away time from improving academic outcomes; play helps improve academic outcomes.

Tools of the Mind is multi-dimensional, and I think that is key to its success. It helps children improve their executive functions, reduces stress and increases joy, has children actively doing, and addresses both social and cognitive development.

AN IMPORTANT ROLE FOR THE ARTS IN ACHIEVING THE GOALS OF EDUCATION

Throughout human history, across *all* cultures, storytelling, dance, crafts, and music-making have been part of the human condition.

People in *all* cultures told stories and passed down information by word of mouth, made music, sang, danced, and crafted beautiful creations. If art, music, dance, crafts, and storytelling are simply frills, to be cut when budgets are reduced or to make room for more time for academic instruction, why did they spring up everywhere on earth and why haven't they been weeded out over the long course of human history? They must serve some important, fundamental human needs. There must be good reasons why those activities have lasted so long and been found so ubiquitously. What could those reasons be?

One of the reasons seems to be that they address the whole person. Music-making, singing, and dancing address our physical, cognitive, emotional, and social needs. They challenge our executive functions, make us happy and proud, address our social needs, and help our bodies develop.

I'm a dancer, so let's consider dance as an example. Consider the National Dance Institute (NDI) founded in 1976 by Jacques d'Amboise or the American Ballroom Theater Company's 'Dancing Classrooms' program founded in 1994 by Pierre Dulaine and Yvonne Marceau. Both exercise and challenge executive functions by requiring discipline and persistence, requiring sustained attention and concentration, and by requiring that children hold complex sequences in mind. The programs are great fun but also hold children to demanding standards of excellence. They are also physically demanding and taxing. They build self-confidence and pride through children seeing themselves conquer challenges and achieve what at first looked impossible. The joy and passion when you watch a session is palpable. Moreover, there is a wonderful sense of social belonging and social support. The children help one another, listen to one another, and respect one another. They know that each is an important part of the whole. Sam Gill, who teaches a form of salsa known as *Rueda* in high school, describes how the *Rueda* sessions address cognitive, social, emotional, and physical development:

I have to admit that when asked to teach dance to teens for the first time a few years ago I did so reluctantly....I imagined a group of lethargic kids whose attention would be difficult, if not impossible, to hold. Was I ever wrong!...I never cease to be amazed by how teens respond to this dance form, the extent to which it actually & perceivably transforms the lives of teens, & how it creates community based on such values as cooperation & inclusiveness & tolerance & joy & all this accomplished among the most diverse &

motley collection of teens... I am stunned by how quickly & happily these kids learn & how eager they are to learn & help one another learn....It meets the needs of youth in remarkable & powerful ways...Dancers exert themselves physically & mentally at levels far beyond what [I had thought] possible. Students' attention is highly focused & for a much longer period of time than [I had thought possible].

...The pace and demands of dancing require full presence....The music does not stop; the calls come constantly, so there is no space to space out, to loose attention, even to reflect on how a dancer is doing....When a move is called, the entire group must do the move simultaneously and accurately in the prescribed rhythmic structure....[D]ancers must listen for the 'call' and react immediately with the appropriate actions. [In the particular style of Rueda that Gill teaches, all dancers dance both lead and follower roles equally. They must not only remember what movement pattern goes with what call, but whether they are currently a follower or leader, and that can change several times in a dance.]

...The dancers become a community, with a clear understanding that everyone's participation is equally important....Without ever mentioning 'community,' dancing Rueda provides an experience that is most fun & satisfying as a successfully working community. The rewards of the community are in the experience of doing things as a group that an individual could never do alone....[T]here is a tacit understanding that everyone dances with everyone else. This is an important bodily experienced understanding of community.

...Sooner or later every student finds him- or herself lost in the dance or going in the wrong direction, and will appreciate a softly spoken word or a light push or pull from another dancer. Such gentle mutual assistance is an important, yet tacit, part of the dancing. It tells dancers it's okay to mess up; it's okay to help; it's okay to be helped. (Gill 2009)

There are few scientific studies of the benefits of dance for other than fitness, posture, or balance. Two noteworthy studies have been conducted with older adults. Verghese et al. (2003) examined the effect of leisure-time cognitive- or physical-activity on the incidence of dementia. At the study's outset all participants were at least 75 years old and dementia-free. Five years later, reading or doing crossword puzzles was associated with a 35% reduced risk of dementia. None of the physical activities offered protection against dementia—except dance. *Dance conferred the greatest risk reduction of any activity, cognitive or physical—a 76% reduced risk of dementia.* Kattenstroth et

al. (2010) studied the impact of many years of regular, amateur ballroom dancing on neurologically healthy elderly people, compared to education, gender, and age-matched controls with no record of dancing or sports. The dancers performed better on the Raven Matrices (a measure of fluid intelligence very highly correlated with executive functions [Duncan et al. 1995, 2008; Jaeggi et al. 2008]) and on a nonverbal executive-function measure of selective attention and concentration.

IMPLICATIONS FOR GIFTED EDUCATION?

If our values and our goals include more than intellectual brilliance alone, then it should follow that there are multiple ways to be gifted, multiple dimensions on which one might be gifted. If the best way to encourage development in any one domain (cognitive, social, emotional, or physical) is to encourage development in all, that has implications for education of gifted students as much as it does for the education of any students. Tom Boyce (2007; Boyce & Ellis, 2005) talks about ‘orchid’ and ‘dandelion’ children. Children identified as gifted are among our orchids. ‘Dandelions’ are those children who do okay wherever they are planted. They are often identified as models of resilience. The amazing thing is that research shows that some of the children who look the worst when they are in an unsupportive, stressful environment are exactly those children who blossom the most when in a good environment. For example, our research and those of others (Diamond et al., 2004; Egan et al., 2001) show that children or adults who are homozygous for a version of the COMT (catechol-o-methyltransferase) gene that has methionine (Met) at codon 158 tend to have higher levels of dopamine in prefrontal cortex and show better executive functions. However, other research shows that they are also more sensitive to and disturbed by stress (Zubieta et al. 2003). It is possible that children who are homozygous for the other version of the gene (the version with valine at codon 158) are likely to be dandelions. They are more robust in the face of stress but do not have the fine-tuning of prefrontal cortex to achieve the brilliance of which a Met-Met child might be capable. The Met-Met child might look like a disaster when in a stressful environment, but might be the star of a gifted program if in the right environment.

Very little is fixed or unchangeable. Fully 90% of our genes are switched off. To a large extent, our experiences, and our reactions to them, determine which genes get turned on (and off), when this

happens, and which remain on or off (Szyf, McGowan, & Meaney, 2008). Experience sculpts and changes the brain throughout life. Therefore, 'brain-based' does not mean immutable or unchangeable. Executive functions depend on the brain, yet they can be improved by the proper activities. Exercising and challenging executive functions improves them (Diamond et al. 2007; Lakes & Hoyt 2004; Mackey et al. *in press*; Olesen et al. 2003; Rueda et al. 2005; Thorell et al. 2009), much as physical exercises hones our physical fitness.

Students (even gifted ones) who view their intelligence as unchangeable tend to shy away from academic challenges, whereas students who believe that their academic performance can be improved through effort and persistence seek out challenges and thus improve more (Dweck, 2000). Similarly, teachers who view academic ability as fixed will be more inclined to give up on students who are not currently performing well. However, discipline, motivation, and academic excellence are not fixed, we can strive to help children improve those. We should forever be seeking ways to present the material differently, engage our students more, change our attitudes or expectations, or whatever it takes so that each and every child is able to shine in his or her own unique way.

REFERENCES

- Aristotle. (4th century BC). *Ethica Nicomachea*.
- Arnsten, A. F. (1998). The biology of being frazzled. *Science*, 280, 1711-1712.
- Baddeley, A. (1976). *The Psychology of Memory*. New York: Harper.
- Balint, M. (1965). *Primary love and the psychoanalytic technique*. New York: Liveright.
- Barnett, W. S., Jung, K., Yarosz, D. J., Thomas, J., Hornbeck, A., Stechuk, R., et al. (2008). Educational effects of the Tools of the Mind curriculum: A randomized trial. *Early Childhood Research Quarterly*, 23, 299-313.
- Baumeister, R. F., DeWall, C. N., Ciarocco, N. J., & Twenge, J. M. (2005). Social exclusion impairs self-regulation. *Journal of Personality and Social Psychology*, 88, 589-604.
- Baumeister, R. F., Twenge, J. M., & Nuss, C. K. (2002). Effects of social exclusion on cognitive processes: Anticipated aloneness reduces intelligent thought. *Journal of Personality and Social Psychology*, 83, 817-827.

- Blair, C., & Razza, R. P. (2007). Relating effortful control, executive function, and false-belief understanding to emerging math and literacy ability in kindergarten. *Child Development*, 78, 647-663.
- Bodrova, E., & Leong, D. J. (2007). *Tools of the Mind: The Vygotskian approach to early childhood education* (2 ed.). New York: Merrill/Prentice Hall.
- Bouthillette, E. (2010, February 17). Pennies, with 'Three Cups of Tea'. *LexisNexis*.
- Boyce, WT (2007). A biology of misfortune: Stress reactivity, social context, and the ontogeny of psychopathology in early life (pp 45-82). In A. Masten (Ed.), *Multilevel dynamics in developmental psychopathology: Pathways to the future* (34th ed.). Minneapolis: Univ. of MN.
- Boyce, WT & Ellis, BJ (2005). Biological sensitivity to context: I. An evolutionary-developmental theory of the origins and functions of stress reactivity. *Development and Psychopathology*, 17, 271-301
- Bracey, G., Montie, J. E., Xiang, Z., & Schweinhart, L. J. (2007). *The IEA preprimary study: Findings and policy implications*. Ypsilanti, MI: High/Scope Educational Research Foundation.
- Brewster Smith, M. (2003). *For a significant social psychology: The collected writings of M. Brewster Smith*. NY: New York University Press.
- Budde, H., Voelcker-Rehage, C., Pietrabyk-Kendziorra, S., Ribeiro, P., & Tidow, G. (2008). Acute coordinative exercise improves attentional performance in adolescents. *Neuroscience Letters*, 441, 219-223.
- Cacioppo, J., & Patrick, W. (2008). *Loneliness: Human nature and the need for social connection*. New York: W. W. Norton & Co.
- Campbell, W. K., Krusemark, E. A., Dyckman, K. A., Brunell, A. B., McDowell, J. E., Twenge, J. M., et al. (2006). A magnetoencephalography investigation of neural correlates for social exclusion and self-control. *Social Neuroscience*, 1, 124-134.
- Cerqueira, J. J., Mailliet, F., Almeida, O. F., Jay, T. M., & Sousa, N. (2007). The prefrontal cortex as a key target of the maladaptive response to stress. *Journal of Neuroscience*, 27, 2781-2787.
- Chodorow, N. (1971). Being and doing: A cross-cultural examination of the socialization of males and females. In V. Gornick & B. Moran (Eds.), *Woman in sexist society* (pp. 173-194). NY: Basic Books.
- Coe, D. P., Pivarnik, J. M., Womack, C. J., Reeves, M. J., & Malina, R. M. (2006). Effect of physical education and activity levels on academic achievement in children. *Medicine and Science in Sports and Exercise*, 38, 1515-1519.
- Cooley, C. H. (1909). *Social Organization: A Study of the Larger Mind*. New York: Charles Scribner's Sons.

- Côté, J.E., & Levine, C.G. (2000). Attitude versus aptitude. Is intelligence or motivation more important for positive high-educational outcomes. *Journal of Adolescent Research*, 15, 58-80.
- Csikszentmihalyi M. (1991). *Flow: The psychology of optimal experience*. New York: HarperCollins.
- Denham, S. A., & Brown, C. (2010). "Plays nice with others": Social-emotional learning and academic success. *Early Education and Development*, 21, 652-680.
- Diamond, A., Barnett, W. S., Thomas, J., & Munro, S. (2007). Preschool program improves cognitive control. *Science*, 318, 1387-1388.
- Diamond, A., Briand, L., Fossella, J., & Gehlbach, L. (2004). Genetic and neurochemical modulation of prefrontal cognitive functions in children. *American Journal of Psychiatry*, 16, 125-132.
- Diamond, A., Churchland, A., Cruess, L., & Kirkham, N. Z. (1999). Early developments in the ability to understand the relation between stimulus and reward. *Developmental Psychology*, 35, 1507-1517.
- Diamond, A., Kirkham, N. Z., & Amso, D. (2002). Conditions under which young children CAN hold two rules in mind and inhibit a prepotent response. *Developmental Psychology*, 38, 352-362.
- Downer, J., Sabol, T. J., & Hamre, B. K. (2010). Teacher-child interactions in the classroom: Toward a theory of within- and cross-domain links to children's developmental outcomes. *Early Education and Development*, 21, 699-723.
- Duckworth, A., Kirby, T., Tsukayama, E., Bernstein, H., Ericsson, K. (*in press*). Deliberate practice spells success: Why grittier competitors triumph at the National Spelling Bee. *Social Psychological and Personality Science*.
- Duncan, J., Burgess, P., & Emslie, H. (1995). Fluid intelligence after frontal lobe lesions. *Neuropsychologia*, 33, 261-268.
- Duncan, J., Parr, A., Woolgar, A., Thompson, R., Bright, P., Cox, S., et al. (2008). Goal neglect and Spearman's g: Competing parts of a complex task. *Journal of Experimental Psychology: General*, 137, 131-148.
- Durkheim, E. (1951). *Suicide: A study in sociology* (J. A. Spaulding & G. Simpson, Trans.). New York: Free Press. (Original work published 1897).
- Duckworth, A. L., & Seligman, M. E. P. (2005). Self-discipline outdoes IQ in predicting academic performance of adolescents. *Psychological Science*, 16, 939-944.
- Dweck, C. S. (1999). *Self-theories: Their role in motivation, personality and development*. Philadelphia, PA: Taylor and Francis/Psychology Press.
- Dweck, C. S. (2006). *Mindset: The new psychology of success*. New York: Random House.
- Edelman, M. W. (2008). A prayer for twenty-first century children. In *The sea is so wide and my boat is so small*. NY: Hyperion.

- Egan, M. F., Goldberg, T. E., Kolachana, B. S., Callicott, J. H., Mazzanti, C. M., Straub, R. E., et al. (2001). Effect of COMT Val108/158 Met genotype on frontal lobe function and risk for schizophrenia. *Proceedings of the National Academy of Sciences*, 98, 6917-6922.
- Gatterer, G. (1990). *Alters-Konzentrations-Test (Akt)*. Goettingen: Hogrefe.
- Gregory, A., & Weinstein, R. S. (2004). Connection and regulation at home and in school: Predicting growth in achievement for adolescents. *Journal of Adolescent Research*, 19, 405-427.
- Gill, S. (2009). *Dancing the rhythms of life: Toward appreciating dancing*. Unpublished manuscript.
- Gilligan, C. (1982). *In a different voice: Psychological theory and women's development*. Cambridge, MA: Harvard University Press.
- Glassman, B. (1998). *Bearing witness: A Zen master's lessons in making peace*. NY: Harmony.
- Harter, S. (1996). Teacher and classmate influences on scholastic motivation, self-esteem, and level of voice in adolescents. In J. Juvonen & K. Wentzel (Eds.), *Social motivation: Understanding children's school adjustment* (pp. 11-42). New York: Cambridge University Press.
- Heschel, A. J. (1991). *Mitzvah and sin*.
- Hillman, C. H., Buck, S. M., Themanson, J. R., Pontifex, M. B., & Castelli, D. M. (2009). Aerobic fitness and cognitive development: Event-related brain potential and task performance indices of executive control in preadolescent children. *Developmental Psychology*, 45, 114-129.
- Hillman, C. H., Erickson, K. I., & Kramer, A. F. (2008). Be smart, exercise your heart: exercise effects on brain and cognition. *Nature Reviews Neuroscience*, 9, 58-65.
- Hollar, D., Messiah, S. E., Lopez-Mitnik, G., Hollar, T. L., Almon, M., & Agatston, A. S. (2010). Effect of two-year obesity prevention intervention on percentile changes in body mass index and academic performance in low-income elementary school children. *American Journal of Public Health*, 100, 646-653.
- Jaeggi, S. M., Buschkuhl, M., Jonides, J., & Perrig, W. J. (2008). Improving fluid intelligence with training on working memory. *Proceedings of the National Academy of Sciences*, 105, 6829-6833.
- James, W. (1884). What is an emotion? First published in *Mind*, 9, 188-205.
- James, W. (1899). *The Law of Habit*. London: Longman Green & Company.
- Jennings, P. A. (2011). Promoting teachers' social and emotional competencies to support performance and reduce burnout. In A. Cohan & A. Honigfeld (Eds.), *Breaking the Mold of Pre-service and In-service Teacher Education: Innovative and Successful Practices for the 21st Century*. New York: Rowman and Littlefield.

- Jennings, P. A., & Greenberg, M. T. (2009). The prosocial classroom: Teacher social and emotional competence in relation to student and classroom outcomes. *Review of Educational Research*, 79, 491-525.
- Jethwani-Keyser, M. M. (2008). 'When teachers treat me well, I think I belong': School belonging and the psychological and academic well being of adolescent girls in India. *Dissertation Abstracts International*, 69, 1986.
- Johanson, G., & Kurtz, R. (1991). *Grace unfolding: Psychotherapy in the spirit of the Tao-te ching*. New York: Bell Tower.
- Kattenstroth, J.-C., Kolankowska, I., Kalisch, T., & Dinse, H. R. (2010). Superior sensory, motor, and cognitive performance in elderly individuals with multi-year dancing activities. *Frontiers in Aging Neuroscience*, 2, 1-9.
- King, M. L. (1947). The purpose of education. *The Maroon Tiger, Morehouse College Student Paper*.
- Lakes, K. D., & Hoyt, W. T. (2004). Promoting self-regulation through school-based martial arts training. *Journal of Applied Developmental Psychology*, 25, 283-302.
- Lange, C. (1887). *Ueber Gemuthsbewegungen*, 3, 8-1887.
- Lieberman, M. D., Eisenberger, N. I., Crockett, M. J., Tom, S. M., Pfeifer, J. H., & Way, B. M. (2007). Putting feelings into words: Affect labeling disrupts amygdala activity in response to affective stimuli. *Psychological Science*, 18, 421-428.
- Mackey, A. P., Hill, S. S., Stone, S. I., & Bunge, S. A. (*in press*). Differential effects of reasoning and speed training in children. *Developmental Science*, 1-9.
- Mead, G. H. (1934). *Mind, self and society: From the standpoint of a social behaviorist*. Chicago: University of Chicago Press.
- Mortenson, G. (2006). *Three Cups of Tea: One Man's Mission to Promote Peace*. NY: Penguin.
- Nkrumah, M. "Changing the face of the world—Innovative contributions from young Africans." Child and Society IV. Bregenz, Austria. 22 October 2010.
- Olesen, P., Nagy, Z., Westerberg, H., & Klingberg, T. (2003). Combined analysis of DTI and fMRI data reveals a joint maturation of white and grey matter in a fronto-parietal network. *Cognitive Brain Research*, 18, 48-57.
- Olson, D. R. (1964). *Cognitive development: The child's acquisition of diagonality*. NY: Academic Press.
- Peck, S. (1978). *The road less travelled*. New York: Simon and Schuster.
- Pennebaker, J. W. (1990). *Opening up: The healing power of expressing emotions*. NY: Guilford Press.
- Remen, R.N. (1996). *Kitchen table wisdom: Stories that heal*. New York: Riverhead Books.

- Remen, R. N. (2000). *My grandfather's blessings: Stories of strength, refuge, and belonging*. New York: Riverhead Books.
- Roeser, R.W., Eccles, J.S., & Sameroff, A.J. (2000). School as a context of early adolescents' academic and social-emotional development: A summary of research findings. *The Elementary School Journal*, 100, 443-471.
- Roth, R. H., Tam, S. Y., Ida, Y., Yang, J. X., & Deutch, A. Y. (1988). Stress and the mesocortico-limbic dopamine systems. *Annals of the New York Academy of Sciences*, 537, 138-147.
- Rosenthal, R., & Jacobsen, L. (1968). *Pygmalion in the classroom: Teacher expectation and pupils' intellectual development*. NY: Holt, Rinehart, & Winston.
- Rueda, M. R., Rothbart, M. K., McCandliss, B. D., Saccomanno, L., & Posner, M. I. (2005). Training, maturation, and genetic influences on the development of executive attention. *Proceedings of the National Academy of Sciences*, 102, 14831-14935.
- Sibley, B. A., & Etnier, J. L. (2003). The relationship between physical activity and cognition in children: A meta-analysis. *Pediatric Exercise Science*, 15, 246-256.
- Sullivan, H. S. (1953). *The interpersonal theory of psychiatry*. New York: Norton & Company.
- Szyf, M., McGowan, P., & Meaney, M. J. (2008). The social environment and the epigenome. *Environmental and Molecular Mutagenesis*, 49, 46-60.
- Tegchok, G. J. (2006). *The Kindness of Others: A Commentary on the Seven-Point Mind Training*. Boston, MA: Lama Yeshe Wisdom Archive.
- Thorell, L. B., Lindqvist, S., Bergman, N. S., Bohlin, G., & Klingberg, T. (2009). Training and transfer effects of executive functions in preschool children. *Developmental Science*, 12, 106-113.
- Twenge, J. M., Catanese, K. R., & Baumeister, R. F. (2002). Social exclusion causes self-defeating behavior. *Journal of Personality and Social Psychology*, 83, 606-615.
- Verghese, J., Lipton, R. B., Katz, M. J., Hall, C. B., Derby, C. A., Kuslansky, G., et al. (2003). Leisure activities and the risk of dementia in the elderly. *New England Journal of Medicine*, 348, 2508-2516.
- Vygotsky, L. S. (1967). Play and its role in the mental development of the child. *Soviet Psychology*, 7, 6-18.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.
- Vygotsky, L. S. (1987). *Thinking and speech* (N. Minick, Trans. Vol. 1). NYC, NY: Plenum Press.
- White, R. (1959). Motivation reconsidered: The concept of competence. *Psychological Review*, 66, 297-333.

- Zeigarnik, B. (1967). On finished and unfinished tasks. In W. D. Ellis (Ed.), *A sourcebook of Gestalt psychology*. New York: Humanities Press.
- Zubieta, J. K., Heitzeg, M. M., Smith, Y. R., Bueller, J. A., Xu, K., Xu, Y., et al. (2003). COMT Val158Met genotype affects mu-opioid neurotransmitter responses to a pain stressor. *Science*, 299, 1240-1243.

SCHOOLING, IDENTITY AND CITIZENSHIP EDUCATION:
AN ETHNOGRAPHIC STUDY

MEENAKSHI THAPAN

Delhi School of Economics, University of Delhi

Education is first and foremost concerned with the human subject. It is the goal of education, as an idea, and as practice, through educational processes, to fashion, mould, and train the human subject. Such training involves the teaching of skills and techniques, how to read and write, numbers, theories, all of which constitute 'knowledge' in one form or another. What constitutes legitimate knowledge and how this knowledge is transacted and communicated through the curriculum is an entire area of study in the sociology of education. In this process, the school (both elementary and secondary) is a significant physical and intellectual space within which knowledge is disseminated and received. The school however is not merely a building where information and technical skills are learnt, some social skills inculcated, examinations conducted, students assessed and evaluated and eventually certified. It is also that moral and symbolic space where socialization takes place, where identities are constructed, and differentiated on the basis of gender, caste, class, race and ethnicity, among others, where young minds follow well-trodden paths of learning, memorizing as well as challenging the given limits of knowledge, where peer cultures are formed, exist and tend to shape everything that takes place in school. Peer cultures also define students' relations with the world outside school. Social networks, career aspirations, 'individual' goals, 'personal' ambitions, and behavioural modes are all influenced by these peer cultures which are heterogeneous and amorphous in nature, changing with time, interests and age cohorts.

The aspect of education that involves the socialization of the young into the norms and values of society is referred to quite simply as education for socialization. The implications of this process are far reaching and have consequences for the growth and development not only of individuals but also of society as a whole. Education as socialization is actually about how the 'self' is constituted in relation to the world, and how school reproduces society through the organization and content of the curriculum and through discursive

modes of interaction and communication. This is the central motif of the idea of education: the processes in educational practice that result in the constitution of the self. The study of education provides us with an understanding of the manifold processes at work within the space of the school, the peer group and the community that are all engaged in the process of constructing the self. The school therefore is an institution not only for different kinds of activity but also a space where relationships of different kinds are constructed, constituted, maintained, contested or celebrated. There is first, a relationship to knowledge, to the written text, to ideas and their limits, to peers, teachers and other school personnel, and to the entire assemblage of activities, events and emotions that constitute the daily life of the school.

At the same time, it is important to point out that although the individual self is constituted always in relation to the social, this does not happen only as an arbitrary imposition or inculcation; it is always a simultaneous creation and engagement albeit informed always by the limiting, constraining and restraining aspects of such an engagement. It is in this sense that sociology ultimately views schools as sites for the evolution of power through the various nerve centers that constitute the school whether these are spatial or intellectual, moral or material, academic or social, personal or public. In this process, how does the human subject find space for articulation, voice and resistance? And how indeed is the self constructed in the school vis-à-vis the 'pedagogic encounter'¹? There are undoubtedly elements of negotiation, challenge and acceptance as well as ambiguities, conflicts and tensions that reflect the multiplicity and complexity within which selves are constructed and reconstructed. This multiplicity of perspectives, of voice and subjectivities, is critical to the pedagogic encounter and suggests that there is no single ideal community; rather, there are webs that create and recreate the possibilities of engagement among different subjectivities.

This paper thus seeks to examine the relationship between schooling, citizenship and identity in the complex, multi-layered and pluri-vocal processes and settings that characterize schooling in contemporary, urban India. I am however not concerned with discovering the most authentic component of citizenship education for

¹ By 'pedagogic encounter' I mean that engagement that takes place with persons, textbooks, the media, in diverse domains and situations in which learning takes place whether this happens in relation to the teacher, the peer group, the family, or society in general.

democracy in government schools in the urban cities of India, nor to understand its outcome for purposes of social change. My work seeks to understand the ‘idea’ of citizenship that is sought to be inculcated through citizenship education in our schools, the manner in which classroom encounters take place, and processes of communication within them. I view citizenship not as a legal status but as a social process that leads to the production of values concerning autonomy, as well as those that construct students’ perceptions of their relationship to society. In this sense, I am concerned with how citizenship ideals are formulated, evolve, are negotiated and expressed in the everyday lives of schools.

I would like to emphasise that my concern is not with textbooks of civics or history as they have been ably studied by Krishna Kumar (2001), among others, but with schooling processes and practices and the experience of children as they seek to make sense of their sometimes turbulent and chaotic world. I begin by trying to understand the relationship between schooling, identity and citizenship before I move on to ethnography of secondary school experience in an urban government school located in north Delhi.

Citizenship and Identity

The relationship between understandings of identity and citizenship is fraught with tensions and uncertainties as there are conflicting expressions and understandings of citizenship based not just on the varying backgrounds of students that endow them with different forms of capital but, most importantly, on the images and understandings of citizenship given out in the classroom and beyond. This complex situation plays itself out in the lives of students who experience identity and subjecthood in vastly different ways.

On the basis of research among children of middle income business families residing in the locality of Daryaganj in Delhi, Latika Gupta (2008) arrives at the startling conclusion that children as young as four years of age form and experience Hindu and Muslim religious identities as different and conflictual. Through an analysis of certain ‘tasks’ she sets for the children and her interaction and conversations with them, she emphasizes “the family’s role in imprinting cultural identity” and argues for appropriate teacher training to enable teachers “to recognize children’s socialization” and thereby to “develop a balanced, secular identity” among children (Gupta 2008: 41). In her focus on the family as the main source of socialization into a religious identity, she appears disregard the role of the elementary school run by

the New Delhi Municipal Corporation (NDMC), where these children spend their school day. While the role of the family in the inculcation of specific identities is indisputable, elementary and secondary schools in India play a crucial role in the reproduction of divisive identities. Scholars addressing this aspect of schooling in India have focused on schools run by the Rashtriya Swayamsevak Sangh (RSS) that seek to indoctrinate the Hindu children in their midst with an ideology that laments the decline of morals and values in Indian society, propagates an excessive pride in the being Hindu and in the Hindu *rashtra* and hatred for other communities and people.² I contend however that it is not only in such schools that we find expressions of such ideologies and schools in India are often sites for the inculcation of particular kinds of religious and politically motivated values. The linkages between political goals and the education of young minds is particularly evident in government schools which are controlled by the state but are more vulnerable to the influence of teachers and administrators in their daily functioning.

A recent ethnography (Benei 2009) focuses on the relationship between ‘ideas’ and schooling in the context of developing an emotional and visceral bonding to ‘the nation’ and thereby building a form of ‘banal nationalism’ among young children. Focusing on schools in western Maharashtra, Benei locates her argument in a framework that celebrates the “*emotional and embodied* production of the political” (*ibid.*: 5). Through finely nuanced ethnography, and a focus on the multitude of practices that constitute everyday experience of school life, whether it is drawing, singing, play and school work, Benei constructs an engaging and engrossing world of how students are transformed into citizens through school life, teacher utterances, and familial beliefs and values. In Benei’s work, replete with students’ voices, and detailed description of school activities, in the historical context of Maratha imagination about self and the Muslim other, there is a sense in which the student emerges as a citizen who is constructed by others.

In this entire exercise, it is assumed by scholars who are looking at the problem of indoctrination from the point of view of the school and

² An early paper by Tanika Sarkar (1996) sets the frame for analyses by several scholars that were to follow. See for example Bakaya (2004), Chaturvedi and Chaturvedi (2004), Sundar (2005). Mukherjee et. al. (2008) provides a chilling analysis of the textbooks used in the RSS schools that distort history and in an apparent commitment to nationalism, distort ‘the history of the national movement itself’ (2008: 43).

a particular ideology alone, that children are mindlessly accepting the ideological prescriptions that are being provided through pedagogic practices and other school activities. While adhering to school norms and practices, students do not necessarily subscribe to the values espoused by different kinds of schools. They are primarily in school to get an education with a view to upward mobility, to help them learn a language, preferably English, gain some knowledge that will ostensibly help them find employment. Peggy Froerer's work (2008) on the Saraswati Shishu Mandir Primary School in Chattisgarh is focused on precisely this unexplored dimension of school life.

Civics and Citizenship Education

Citizenship education is not necessarily taught in specific classes using particular texts. It is happening all the time in the school and outside. However, formal citizenship education takes place through the teaching of subjects such as history and civics. Apart from providing information about the government, the study of civics generates knowledge about students' rights, duties and privileges. Knowledge about how the government works, the various structural institutions, constitutional frameworks, and other details about government education are considered essential to develop a critical approach to how government functions. It therefore appears as an essential component of the curriculum and the focus of most schools engaged in citizenship education through the curriculum is thus on government education and on inculcating civility in a deferential context in largely subordinate relationships. Citizenship education rarely encourages questioning or challenging authority or taking issue with the practices of the state and in that sense is far removed from critical pedagogy as we understand it.

The idea of the 'good' citizen serves to dwell on and reproduce ideas about the 'practice' of good citizenship through developing certain socially desirable behavioural traits and practices. This is done through developing a respect for authority, the rule, the law, socially constituted and legitimised norms for good behaviour that are rewarded and reproduced, and through rituals and ceremonies in school, a reiteration of national ideals, a celebration of collective life and the value of an ideal community.³ The obedience that is sought to

³ It is suggested that there is a tendency to collapse 'character education' into 'citizenship education' although the former is clearly concerned with the moral upliftment of the individual in and beyond the school. Citizenship education, on the

be inculcated reflects a concern with developing a particular kind of subjectivity that recognizes the necessity of compliance and agrees to submit, rather than question, in view of the complexities that prevail among the school lives of children. Apart from this limitation, the more damaging omission is the complete lack of actively developing a concern and empathy for others regardless of their caste, class, religion, or gender.

The School under Study

There are variations among schools and these are sharply marked in private schools and in government schools that cater to children from the lower socio-economic strata. The Directorate of Education (DOE), under the aegis of the Govt. of NCT of Delhi, offers the following goal as part of its 'vision': "To make students responsible citizens who may meaningfully participate in national effort" (DOE website). None of this is however explained in the document which later elaborates, "Education holds key to economic and social growth. Quality of life of an individual is also governed by the education. Accordingly, high priority has been accorded to education by the Government. Sufficient funds are allocated to education sector in annual plans" (*ibid.*). This kind of a good intentioned but vague beginning, with poor articulation of real objectives, and an emphasis on 'national effort' seen in terms of only 'economic and social growth', can perhaps lead to a lack of understanding and complete confusion, among school pedagogues, of the components of citizenship education in schools in a rapidly growing and changing society like India.

There are 1040 government schools in Delhi alone run by the DOE. The schools are divided into different districts, and within those, there are zones, and each zone has a given number of schools. For example, there are two zones in the north district of Delhi with approximately 30-35 schools in each zone. In some re-settlement colonies, there are 4000 students in one school with very large numbers of students in each class.⁴ The Govt. Boys Senior Secondary

other hand, is concerned with 'the exploration and search for and abuses of moral thinking and conduct principally as it emerges from, and relates to, social and political frameworks' (Davies, Gorard and McGuinn 2005: 347).

⁴ In December 2007, the total number of students was 1022, of whom there are 102 students belonging to the category of Scheduled Caste and 77 in the category of 'Minority' which includes Muslims (72), Sikh (3), Christians (2).

School (GBSSS) is located in one of the two zones in the north district, in a crowded part of north Delhi, close to the inter-state bus stand, in the vicinity of a cinema hall, narrow alleys and petty shops. Fieldwork was conducted over a period of two months. A series of classroom observations were conducted in the 9th standard classroom, interviews were conducted with teachers and the Principal, 45 students responded to a questionnaire, group discussions were held, and one case study was developed with a particular student in school and at his home.

There are a total of 932 students in the school (at the time fieldwork was conducted) and of the 45 students who took part in this study, the fathers of 32 are engaged in some kind of skilled or semi-skilled occupations and private business. These include that of telephone mechanic, fitter in railways, shopkeepers, bus driver, policemen, artist, property dealer, clerk, guest house manager, messenger with a government agency, and the like. The rest include those who earn their livelihood from setting up a small moveable stall selling towels, barber, gardener, labourers, cook, milkman, and other such occupations. All the mothers are 'housewives' except one, a widow, who works at home by cutting out and preparing stickers for sale. Using material from this school, from observation of events such as the morning assembly, classroom encounters, staff room conversations, and other aspects of school life, including the voices of students, I now examine specific aspects of what is considered citizenship education.

History Teaching and Values of Freedom

The relationship between the teaching of particular subjects and the development of values and a morality is evident from the teaching of history. An important part of history teaching in secondary schools in India is the portrayal of the national struggle for liberation from British rule. The aim appears to not only provide information about the past that was so significant to the development of an independent India but more importantly to constitute an ideology of patriotism, loyalty and fearless commitment to the cause of political freedom. At the same time, it also provides and apparently neutral but obviously tempered view of Hindu-Muslims relations at the time and constructs the Muslim other as difficult to deal with (especially in the persona of Jinnah and the Muslim League) and does not fail to emphasise the role of Gandhi, Nehru and other nationalist leaders. The values espoused by Gandhi as crucial to his strategy for wresting freedom from the British are mentioned but not explained in a detailed or nuanced telling

of the times. In this context, Krishna Kumar argues that as Gandhi is given a ‘unique status’ in these texts, his “motivation, his philosophy and his logic need to be understood as the basis for the appreciation of his actions” (2001: 138-9). However, the textbooks provide a minimal understanding of terms such as ‘truth’ and ‘non-violence’ and therefore Krishna Kumar poses the question, “is a nominal understanding of such ideals adequate for appreciating Gandhi’s political leadership?” (*ibid.*: 139). Undoubtedly not, as evidence from the school shows us.

The writings of class 9 students in GBSSS point to their complete disavowal of privileging the authority of the textbook in articulating their preference from among the leaders of the national struggle against the colonialist regime. They are almost unanimous in voicing their preference for the one leader who, in their minds, used violence and led a passionate struggle against authority and British rule. Gandhi is clearly not the preferred choice. An almost equal number of students prefer Gandhi and Bhagat Singh over other leaders. However, while Gandhi is appreciated for his gentleness, non-violent methods and qualities that make him into a ‘Mahatma’, Bhagat Singh is also valorized for his spirit of sacrifice and the belief that had he not been there, India would not have attained freedom from British rule. The reasons they give for their support of Bhagat Singh point to the ideals of aggression, violence, fearlessness within an overall language of social acceptability, viz. the value of ‘sacrifice’ for the nation-state. Although textbooks do not ‘teach’ this particular contribution made by Bhagat Singh, students seem to have imbibed it from somewhere. The popular culture, through Bollywood films, television, folklore, stories, comic books, no doubt influences student constructions of valour and heroism. We need to also understand the role of the peer group which further develops these understandings into a more coherent perspective and provides legitimacy to that which would otherwise remain embedded in the ‘private’ worlds of children, unspoken and unknown to others, especially teachers and other adults. In an informal conversation with class 12 students in GBSSS, a question about why Gandhi is called ‘Bapu’ triggers off a spate of negative responses: “He is not ‘Bapu’ but ‘*Sautela*’ bapu” (step-father), “you know he sold our country, he is responsible for creating Pakistan,” “Today, India, Pakistan and Bangladesh would be one country.” The support for Bhagat Singh is unanimous; on being asked about their choice among the freedom fighters, the students reply in chorus – “Bhagat Singh.”

Quizzed further for their reflection on the Bhagat Singh's ideology, they reply, "*desh sewa*" (service to the nation).

This value of selfless service to the nation, and the heroism embedded in the value of sacrifice, reflect an ideal of citizenship in the minds of students and is no doubt derived from the emphasis on patriotism, respect for national boundaries and the emergence of a self in relation to this narrowly defined identity that is sought to be inculcated through public events in the school, such as the morning assembly. Morality is however not reflected in respect for the nation-state alone, but also through other ideals of citizenship such as 'good education' and 'good behaviour'. Our understanding of this aspect of schooling would be incomplete without an understanding of the assembly at GBSSS.

Morning Assembly at GBSSS

The morning assembly at GBSSS is an important component of the school routine as it is a daily collective event symbolizing a coming together of students and teachers to ritually celebrate their common presence in the space of the school.⁵ It is also a requirement from the DOE and is therefore indispensable to the curriculum. The respect for the national anthem is well ingrained in all students who display remarkable restraint in their behaviour by standing still, poised and focused completely on the singing of this particular piece. The symbolism of the national anthem as a song worthy of highest respect and stature is fixed in the minds and hearts of all children and the teachers. Group solidarity and loyalty are undeniably centrally focused in the singing of the anthem which symbolizes not just the nation but also the individual's relationship to the nation through embodied gestures that signify respect and deference. The development of boundaries at this stage is quite sharp. There is not only a sense of 'my nation' but also of 'my religion' that comes from the songs and music as well as from the lectures by teachers on this occasion. A clear sense of religious identity is therefore linked to national identity in the choice and repetitive singing of particular kinds of music. There is undoubtedly an exclusion of all other religions in the choice and it is not clear whether this is at the direction of the DOE or is the school's or particular teacher's choice. Further inculcation of

⁵ Elsewhere, I have identified the morning assembly as part of a set of rituals and ceremonies that are essential to maintaining a sense of *communitas*, or we-feeling, in the school culture. See Thapan (2006b).

ideals of 'good' behaviour and religious practice takes place through the brief lectures and homilies presented by various teachers.

One such is the following by a teacher, "Our development takes place through religious prayer and song. Keep faith in god and have peace in your mind. We should keep away from bad company especially from dirty boys. We should not eat *gutka*." Good behaviour is expected to flow from such a virtuous life that includes 'peace in the mind/heart'. This is symbolic of the value of 'goodness' that is perhaps associated with an ideal citizenry and its meaning is not lost on the students who tend to mouth similar homilies in interaction with them. Citizenship education takes on the form of character education in such contexts as teachers strive to ensure that 'good' character forms the basis for 'good' citizenship.

Teachers also use the assembly to provide their perspective on the mix between religion and everyday life. This includes references to popular gods as well as to Hindu leaders and the element of discipleship that is considered central to being a good Hindu. "Hanuman is god of Thoughts. You all should be acquainted with good thoughts because it will give you self-satisfaction and moral height. Students should always be obedient and see the example of Vivekananda and his guru Paramhansa. Vivekananda was the best student of Paramhansa and it was because of his obedience that the guru blessed him to be successful and he remained immortal even after his death". The virtues of the *Guru-chela* relationship are extolled and presented as paramount. There is an explicit effort to suggest obedience, loyalty and subservience on the part of the student. The attempt to inculcate a religio-national identity, appealing to 'good' thoughts and 'peaceful' minds, is part of the attempt to locate national identity in a well-marked and clearly defined religious identity.

To put the assembly in the perspective of the student culture is interesting for it reveals their cynicism towards school culture: students believe that the songs are for the benefit of the officers from the Directorate, who may visit the school 'to keep them happy'. While this may appear to thereby suggest that there is no serious meaning attached to such music, the repetitive nature of the ritual, enacted on a daily basis, has the potential for developing an identity in the context of special national and religious boundaries.

Students express and share their views without any hesitation in their peer group. Fear of being different from the peer group, as well as from the culture of school life, is however rather strong, and conformity becomes the norm to ensure a sense of security and safety among

children against the largely dominating world of the adults. This in its own way creates and sharpens the culture of sameness, already promoted in all schools, so that difference is emphasized and becomes an alien presence. Identities are therefore formed, and reaffirmed, in relation to those others who are more or less alike, have unopposed views and are largely defined by their cultural and religious roots.

Classroom Encounters: Creating the Other

In this student culture, the pedagogic encounter that takes place in the classroom has a particular value because it allows for the expression of views and perspectives in front of the ‘authority’ of the teacher, depending on the particular teacher who is present in a classroom on a particular day. The classroom is also that space where ‘legitimate’ knowledge is transmitted which sets the agenda for what students understand about the ‘idea’ of citizenship, as derived from textbooks and from the teacher’s perspective.

A Civics classroom: the teacher enters the classroom at 12.30 pm (several minutes late). There were only 18 students present and several of them without books.

Teacher: Today I am going to teach a very important chapter and questions are bound to come in the examinations. I’m going to teach you about Democratic Rights.

(The emphasis on the examination results in two students who were sitting at the back bench going forward to sit in the front desks.)

Teacher: What are the Fundamental Rights given to the Indian citizen?

Student 1: Right to Equality and Right to Freedom.

Student 2: Sir, we have right to religion.

Student 3: Right to protest against inequality.

Teacher: Yes, you are all right. Well tell me why are rights given to the citizen?

There is no answer from the students.

Teacher: Who gives us the rights?

Student 1: The government gives us the rights.

Student 2: Society gives us the rights.

Student 3: Constitution gives us the rights.

Teacher: Who protects the rights?

There is no answer, and then the teacher explains.

Teacher: The law protects the rights. We cannot develop without rights neither our society can develop. The rights are sanctioned by the society and protected by law.

Teacher: Tell me what is the importance of rights?

Student 1: Sir, Rights are important for the development of humanity.

“Good”, the teacher encourages other students.

Student 2: For the development of society.

Good, the teacher looks at the book and then again asks the students.

Teacher: Is India a secular country?

The reply “Yes” is in chorus.

Teacher: How can you say that India is a secular country?

Student 1: Sir, we have freedom to enjoy any religion we want.

Student 2: Sir, there are many religions practiced in our country.

Teacher: You both are right. In India, many religions are practiced and we are free to enjoy any religion we want. Nobody can be punished on the basis of religion. In our constitution the word ‘secular’ is clearly mentioned, the Government cannot interfere on the basis of religion.

Student: Sir, then, why is some religion given more preference like the Muslims of our school are paid Rs. 300 every year?

Teacher: See, the government adopts measures to bring the minority religion to the mainstream and government gives financial help to those who are below poverty line.

“Now show me the home-work and, those who have not done, stand up,” said the teacher.

The efforts by the state to include poor children from a community that is a religious minority by offering cash incentives for school attendance in fact ends up highlighting their difference from the rest. Often, at assembly, announcements are made asking these children to bring their guardians to school to collect the money. As this lesson on ‘rights’ very clearly shows us, Muslim students are seen as being privileged because they receive an annual cash allowance. Considering the overall background of children in this school, as underprivileged and first generation learners, the animosity that is built up against

Muslim students who are favoured with special dispensation, is a real and palpable presence. The teachers have not yet evolved a method through which they can actually rectify some of these misapprehensions through dialogue and discussion and perfunctory reasons are provided primarily to close discussion rather than open them up in any meaningful manner.

This pervasive culture of the authority of the teacher, and the school as an institution, surrounded by ambiguity and confusion, in which the only semblance of order comes from the commands at morning assembly, or from the Principal's office, where large charts detailing the day's activities, the time-table, various lists and notices are prominently displayed constitutes the school culture. It is also the chaotic and turbulent world in which students learn to survive, rebel, and also manipulate to their advantage. The Principal's complaint that the largest problem he faces is that of truancy is easily understood as he really does not have very much to keep the boys in school. Some teachers themselves go twenty minutes late to class, but freely use corporeal punishment to check latecomers or those who don't bring their books to class, twisting their ears and caning them on their backs with complete abandon and fearlessness in the presence of the researcher. The boys exit from the school gate in full view of anyone who cares to watch, telling the lone researcher who observes their departure, that they are going to watch films, or play cricket, or just hang about with other boys outside. What emerges is the complete uselessness of it all and the ideals for citizenship education are, no doubt, lost in this bedlam that passes for education in contemporary India.

Schooling and Educating for Citizenship in Contemporary India

The conditions we encounter in urban government schools, like the one under study, in contemporary India are fraught with apathy on the part of teachers, resistance and boredom on the part of students, conflict, and suffering. This is the reality of our schools, especially those run by the state. In addition, the social condition of acute poverty disallows some to come to school and those who do, to perhaps never achieve their goals. The question of critical significance, to the purpose of this paper, is about how prevailing school cultures, such as at GBSSS, inflect ideals of citizenship education and in turn impact the formation of identities? Undoubtedly, these 'ideals' of citizenship education are theoretically framed and articulated by educators outside schools. Schools, in themselves, continue with character education,

understood as citizenship education, engendering a culture of obedience and loyalty, focusing on the narrow and known, unable to open up or understand the world of the unknown. Identities therefore remain encapsulated within this culture of the known, which emphasizes sameness and eliminates or marks our difference as problematic. Identities in this manner are fixed in a collective self, separated from others, which results in prejudices which get embedded in the minds of children (Piper and Garratt 2004).

Building up a culture of willingness to explore the unknown would imply a movement away from the dominant culture and a commitment to recognise and respect other cultures, religions, and people. Such an engagement with the unknown is the only way to understanding, sharing, and relating to those others who are differentiated from the majority by caste, class, gender, race and religion. The experience of sameness must be extended across divisions of religion, class, gender and caste. This is possible only when there has been an unlearning of the hurts and memories of the past taught through history textbooks of various times and the development of a completely new perspective that looks afresh at people and relationships. Such a view opens up a vast arena of potentiality, as it seeks to break boundaries and borders, to end closure and look only to openness, or to that which may bring the unknown into close and intimate connection.

The effort to inculcate a culture of questioning, doubt and criticism, is no doubt a laudable aim in schooling processes that have numbed the minds of children through decades of rote memorisation, repetition, and sheer boredom. While such methods may create a culture of critique and engagement that is important and engenders an understanding, for example, of how power works in everyday life, this in itself is not enough to allow for the movement into the unknown. In an important paper on the loss of the Buddhist conscience in contemporary times in Sri Lanka, Obeyesekere quoting the Buddha, cautions us, "Hatred that burns on the fuel of justifications must be quenched with the water of compassion, not fed with the firewood of reasons and causes" (1991: 232). This indicates the necessity of a completely new approach that works in different ways with teachers and children. It is apparent that this approach undeniably appeals to the psychological dimensions of human behaviour, including emotions, through developing feelings and behaviour in consonance with compassion and 'imaginative action'. In the same spirit, Yusuf Waghid (2005), writing in the context of education in South Africa, argues for a policy of citizenship education that advocates

‘compassionate action’. Compassionate action is based on an understanding and experience of compassion that is not necessarily derived from rational choice and explanation. Compassion, Waghid argues, is necessary for understanding the suffering of others and in this manner “pushes the boundaries of the self” outwards (Nussbaum, as quoted by Waghid, *ibid.*: 334).

To be in relationship is the central tenet of the work of the Indian philosopher J. Krishnamurti (1895-1986) reflected in his uncompromising assertion, “You are the world”.⁶ This sense of loss of identity as a self-concerned individual is in fact critical to Krishnamurti’s writings where he repeatedly asserts that ‘relationship’ is the basis of human existence. He points out, for example, “There is no life without relationship; and to understand this relationship does not mean isolation. On the contrary, it demands a full recognition or awareness of the total process of relationship” (Krishnamurti 2001). Compassion comes about through intelligence which, for Krishnamurti, is not derived from academic knowledge or by learning some skills.⁷

To begin with, children and teachers must understand that suffering is serious and is undeserved by anyone. Moreover, it is possible to experience the suffering of another as one’s own and through this process, recognize that that it is necessary to alleviate the suffering. The cultivation of compassion therefore depends on the

⁶ See Krishnamurti (2007b) for his complete works. I have elsewhere discussed Krishnamurti’s work on education in depth; see for example Thapan (2001, 2006b).

⁷ At the Rishi Valley School, located in rural Andhra Pradesh, (run by the Krishnamurti Foundation, India), there is an effort to develop this sensitivity and awaken intelligence in a variety of ways including a non-authoritarian relationship among teachers and students based on trust and understanding, discussion during ‘culture’ classes, the assembly, and through participation in work and activities relating to the school’s environment regeneration, rural education and health programmes. As a point of contrast, it is of interest to note that the Vancouver School Board (that governs public schools in Vancouver, Canada) has a programme in place for elementary school children. Entitled ‘Roots of Empathy’, this programme is designed to develop ‘emotional literacy’ in young children with the help of a baby and parent who visit the classroom every three weeks in an academic year. It is claimed that the programme has ‘shown dramatic effect in reducing levels of aggression and violence among school children while raising social/emotional competence and increasing empathy’ (Roots of Empathy). While I cannot go into the details of this programme here, my observation of an elementary school classroom using this programme in Vancouver, in December 2007, records, on that particular day, the depth with which young children learn to share experiences of sorrow and suffering in their everyday lives bringing about an awareness amongst themselves of such issues (Thapan n. d.).

elimination of difference and the ability to acknowledge some sort of community between oneself and the other. This understanding of citizenship education needs to prevail in schools to enable the possibilities of a culture based on equality and justice in the complex times we live in.

REFERENCES

- Bakaya, Akshay. 2004. Lessons from Kurukshetra. The RSS Education Project. In Anne Vaugier-Chatterjee (ed.) *Education and Democracy in India*. Delhi, Manohar and Centre de Sciences Humaines: 27-53.
- Benei, Veronique. 2009. *Schooling India. Hindus, Muslims and the Forging of Citizens*. New Delhi, Permanent Black.
- Chaturvedi, Jayati and Gyaneshwar Chaturvedi. 2004. The construction of Saraswati: Formation and Transformation of Saffron Identity in Contemporary Uttar Pradesh. In Anne Vaugier-Chatterjee (ed.) *Education and Democracy in India*. Delhi, Manohar and Centre de Sciences Humaines: 239-252.
- Davies Ian, Stephen Gorard and Nick McGuinn. 2005 Citizenship education and Character education: similarities and contrasts, In *British Journal of Educational Studies*, 53, 3:341-358.
- DOE website: http://edudel.nic.in/welcome_folder/aboutdep.htm, accessed on January 30, 2008.
- Kumar, Krishna. 2001. *Prejudice and Pride. School histories of the freedom struggle in India and Pakistan*. New Delhi, Viking.
- Hasan, Mushirul and M. Asaduddin. 2002. Introduction, in Mushirul Hasan and M. Asaduddin (eds.) *Image and Representation. Stories of Muslim Lives in India*. Delhi, Oxford India Paperbacks: 1-16.
- Hennessey, Peter H. 2006. *From Student to Citizen. A community-based vision for Democracy*. Toronto, White Knight Books.
- Herzberger, Radhika. 2007. Introduction. *J. Krishnamurti. The Path and the Pathless*, KFI Gathering Booklet, Rishi Valley. Pp. 3-19.
- Krishnamurti, J. 2001. *Freedom from the Known*. Chennai: Krishnamurti Foundation (India).
- _____. 2007 a. from, *Letters to the Schools Vol. I: 90*. The Krishnamurti Text Collection, CD-ROM for Windows. Krishnamurti Foundation Trust Ltd., England.
- _____. 2007 b. *The Krishnamurti Text Collection*, CD-ROM for Windows. Krishnamurti Foundation Trust Ltd., England.
- Levinson, Bradley and Dorothy Holland. 1996. The Cultural Production of the Educated Person: an Introduction, Bradley A. Levinson et. al. (eds.) *The Cultural production of the Educated Person. Critical*

- Ethnographies of Schooling and Local Practice*. Albany, State University of New York Press.
- Mukherjee, Aditya, Mridula Mukherjee, Sucheta Mahajan. 2008. *RSS, School Texts and the Murder of Mahatma Gandhi*. Los Angeles, London, New Delhi, Singapore, Sage Publications.
- Obeyesekere, Gananath. 1991. Buddhism and Conscience: an exploratory essay. *Daedalus*. 120 (Summer).
- Oomman, Rohini. n.d. Textbook on Civics prepared for the ICSE Board. *Draft available at Rishi Valley School library*.
- Piper, Heather and Dean Garrat. 2004. Identity and Citizenship. Some Contradictions in Practice. *British Journal of Educational Studies*. 52, 3: 276-292.
- Roots of Empathy: <http://www.rootsofempathy.org/ProgDesc.html> accessed on February 22, 2008.
- Sarkar, Tanika. 1996. Educating the Children of the Hindu Rashtra: Notes on RSS Schools, in P. Bidwai, H. Mukhia and A Vanaik (eds.) *Religion, Religiosity and Communalism*. New Delhi, Manohar Publishers.
- Seth, Vikram. 2007. On Founder's Day (1992). In, Rudrangshu Mukherjee (ed.) *Great Speeches of Modern India*. New Delhi, Random House.
- Sundar, Nandini. 2005. Teaching to hate. The Hindu Right's pedagogical program. In, Tom Ewing (ed.) *Revolution and Pedagogy*. Palgrave-Macmillan: 195-218.
- Thapan, Meenakshi. 2001. 'Profiles of Famous Educators. J. Krishnamurti (1895-1986)', in, *Prospects, Journal of the International Bureau of Education*, UNESCO, Geneva, Vol. XXXI, No. 2, June: 253-265.
- _____. 2006 a. 'Docile' Bodies, 'Good' Citizens or 'Agential subjects'? : Pedagogy and Citizenship in Contemporary India, *Economic and Political Weekly*. (30 September). Vol. XLI, No. 39: 4195-4203.
- _____. 2006 b. *Life at School: An Ethnographic Study*. (Second Edition, with a new Introduction) New Delhi, Oxford India Paperback.
- _____. n.d. Field notes on research in Vancouver schools in December 2007. Personal collection.
- Van der Veer, Peter 2001. *Imperial Encounters. Religion and Modernity in India and Britain*. New Delhi and Princeton, Permanent Black and Princeton University Press.
- Waghid, Yusuf. 2005. Action as an educational virtue: Toward a different understanding of democratic citizenship education. *Educational Theory*. 55, 3: 323-342. *Schooling and citizenship education*.

SOCIAL EMOTIONAL LEARNING AND EDUCATION

JEAN K. MILLER
Association Montessori International

The topic for this speech is Social Emotional Learning and Education in a Montessori Setting. When describing Montessori it is important to remember that there is no control over the use of the name, Montessori.

What I will say about Montessori is based on the training I have received, the many, many observations I have done of Montessori classes in different parts of the world and in different socio-economic settings, and the experiences I have had as a classroom teacher using the Montessori method with two and a half to twelve year old children in both public and private Montessori schools. So I begin with some of what I understand and believe about Montessori.

I will refer to classes for six to twelve year old children as elementary classes because the term, primary, means different ages in different countries.

In Montessori there is a general belief that the natural condition of children is to learn, grow and develop in a positive manner—physically, emotionally, socially, spiritually and intellectually—in an integrated manner as a whole human being rather than as separate parts of themselves. There is also the belief that children each develop all those aspects of themselves at their own pace and that education should be offered to each child according to the child's readiness. This is all done within the social community of the classroom because becoming a member of the group is equally as important as all the other kinds of learning that is done in schools.

The social development of the children is aided by the inclusion of three or more different ages in the class. This gives children the opportunity of experiencing the three different roles and behaviors associated with being the oldest, the youngest and the middle child in a family.

In general, the older children serve as role models of the social behavior and of the intellectual activity that occurs in the environment. They take a leadership role as they help younger children, perhaps by helping them get ready to go outdoors or reminding them of the ground rules. They may also give the younger children lessons on the use of some of the materials. When you teach something to someone else, you gain an even deeper understanding of the work yourself.

As the younger children engage in their own activities in the class, they also carefully observe the older children at work in the environment and they observe the older children receiving lessons from the adult. When it is their turn to be given those lessons they will have already absorbed a great deal of information about them so the lessons will be understood more easily. The children in the middle age range will sometimes receive help from others and will sometimes give help. This enables them to develop flexibility in their interactions with others. Another benefit of the three-year age range seems to be a diminishing of competition and an increase in cooperation and helpfulness among the children.

When Montessori is done correctly, a small social community develops in which the members have compassion for one another and help each other. This makes for a happy atmosphere that assists children in reaching their own potential, and in belonging to a group, and in developing the habit of being happy.

The materials and activities offered to children in Montessori environments are the result of more than 100 years of experimenting and observing to see which materials and activities were appealing to children at what ages and in what sequence. The criteria used to determine which materials and activities were kept and which were discarded was the concentration children displayed when engaged in the activity. Montessori referred to this as ‘polarization of attention.’

Another element that she discovered and that contributes to the happy, compassionate atmosphere in the classroom is called the Exercises of Grace and Courtesy. This resulted in presentations on such things as:

- how to shake hands
- how to open and close a door
- how to introduce yourself to someone else
- how to excuse yourself
- how to blow your nose
- how to walk around a work rug so you do not disturb another child’s work

The Exercises of Grace and Courtesy are done as would be appropriate in the children’s culture. For example, a list of Grace and Courtesy lessons in India included how to hail a rickshaw.

Montessori took from Hugo DeVries, a Dutch biologist, the idea of sensitive periods and applied them to children. Sensitive periods may also be called ‘windows of opportunity.’ These are periods of intense interest and engagement in certain kinds of activities. One might define

a sensitive period as the time when the brain is ready for a new development. During a sensitive period Montessori observed that children were attracted to the activity that would enhance that development. Perhaps, from this viewpoint, Montessori is simply following human biology so that children may stay in tune with their own natural desire to learn, grow and develop as nature intended.

In order to facilitate this, adults in a Montessori environment must observe children and keep careful records in order to figure out what each child should be offered next. (Could we call this mindful practice on the part of the adults?) This is a very different process than simply following a curriculum that is taught to everyone in a class at the same time. It means keeping one's mind on the natural developmental needs of the children.

Presentation of materials during a child's sensitive period for a skill or concept results in deeply concentrated activity that is repeated many times. When the skill has been learned or the concept has been understood the activity diminishes and the child exhibits contentment similar to the contentment that is present after a good meditation. Joy is also associated with the activity. The whole child—body, mind and spirit—seems to have been engaged—physically, intellectually and emotionally. In Montessori this is described as a developmental use of the material because the development that occurred was appropriate to the current sensitive period of the child and it appeared to engage the whole child.

When a sensitive period has passed and a child has not had the opportunity to engage in the kind of activity that would help develop the skill or concept involved, the material is presented to the child in a didactic manner in order to teach the child the skill or concept. When this occurs the child's engagement with the activity is very different. There is generally only an intellectual involvement. Joy is not evident and the contentment mentioned before is not present. This kind of teaching is used so that the child will gain the skills or knowledge that he or she will need in order to engage in the kinds of activities that will be appropriate while new sensitive periods emerge as the child develops.

This was clearly demonstrated by children in the class I was teaching. Those who had been in Montessori from age three onwards, and had received introductions to mathematical concepts during the appropriate sensitive periods, had a love for math. Children who were new to Montessori at age six, were taught the concepts in math that they had missed, but they did not exhibit the enthusiasm about math the way the other children did. They could do the work intellectually, but

the joy was not present. This is generally the difference between a developmental use of material and a didactic use of material. One is joyful and seems to engage the whole child, the other is simply intellectual.

My most recent classroom work with children has been with a class of six to ten year old children. As Montessori observed children of that age she noticed three things in particular. One was their eagerness to learn. She said

Knowledge can be best given where there is eagerness to learn, so this is the period when the seed of everything can be sown, the child's mind being like a fertile field, ready to receive what will germinate into culture. But if neglected during this period, or frustrated in its vital needs, the mind of the child becomes artificially dulled, henceforth to resist imparted knowledge. Interest will no longer be there if the seed be sown too late, but at six years of age all items of culture are received enthusiastically, and later these seeds will expand and grow.¹

She goes on to say, "A second side of education at this age concerns the child's exploration of the moral field, discrimination between good and evil." In the first plane of development children simply accept what adults tell them is good and bad. But at this older age children want to figure that out for themselves and they are especially concerned about what is fair and what is not fair. They do not just accept what the adults say, especially if the adults say one thing but do another. Montessori elementary classroom environments give children the opportunity to have their own experiences of living and working together so they can think through what is right and wrong themselves. By doing so they construct their own moral compass.

Montessori goes on to say

Yet a third interesting fact to be observed in the child of six is his need to associate himself with others, not merely for the sake of company, but in some organized activity. He likes to mix with others in a group wherein each has a different status. A leader is chosen, and is obeyed, and a strong group is formed. This is a natural tendency, through which mankind becomes organized.

¹ All quotes are from: Montessori, M., 1996 [1948], *To Educate the Human Potential*, ABC Clío: Oxford.

In other words, this is a time when children are practicing ‘society,’ experiencing how a society functions and how they can function as a member of that society.

One of the goals of Montessori elementary classes is to help children develop an understanding that all of the people of the world have the same needs as they do. It does not matter where people live or when they lived, all have the same needs. For this we use a chart called Fundamental Needs. It shows two kinds of needs. Physical and spiritual. Physical needs include food, clothing, shelter, transportation, and defense. Spiritual needs include a belief system, membership in a culture and a way to indicate what culture or group we belong to by the way we dress or adorn ourselves. This chart is used as a guide when children study cultures of the past or present. How did the people fulfill their need for food? What kind of structures did they live in? Etc. With this activity we hope the children come to realize that they are part of the human family and that we all have the same kind of needs. We also hope that they appreciate the variety of ways that people in different cultures and different geographical places on earth have met those needs.

Other goals include:

- helping children develop gratitude for the people who have preceded us on this earth for all their labor and inventions that have benefited our life today
- helping them develop an understanding of the interdependence of the peoples and nations on earth
- helping them develop an ecological view of the interdependence of all living and non-living things on earth
- and helping them realize that peace is a better choice for humanity than war

While properly run Montessori classrooms are generally very pleasant places for children to be, I wanted to experiment to see if this could be enhanced by having elementary children make up the classroom rules of behavior for themselves and to do it in a way so the children would feel ownership of the rules. My goal was to have the children experience cooperation, appreciation, and compassion, etc., for each other in their own classroom.

This experiment was done in a new class in a school that had not had Montessori for children older than six before. Most of the children had attended Montessori classes for three to six year olds at the school. This meant that they had experienced three years worth of Grace and Courtesy lessons in a small community of children who cared for and

helped each other. Some had transferred to elementary classes at other Montessori schools and now had transferred back to their original school. A few other children were new to Montessori at age six. The class was composed of six to ten year olds.

After introducing the children to each other and to the environment on the first day of the new school year, they all sat down together in front of a large board on which I could write. I asked them, "What kind of a place do you want this school to be?" Their answers seemed to group into the following categories:

- a safe place
- a fun place
- a learning place
- a place where no one got his or her feelings hurt

Then I said, "If this is the kind of place you want, what kind of rules do you need to have?" The six year olds seemed somewhat mystified by this but the seven to ten year old children had no difficulty coming up with rules, but they were all stated in the negative. For example, one of their rules for safety was, "Don't run in the classroom."

I reminded them that we were all going to have to help each other remember the rules—but how would they feel if they were constantly told, "Don't do this! Don't do that!" They thought that would not feel very good so I asked their permission to take the rules home with me that evening and change them into positive statements, such as, "Walk when you are in the school building." They decided that was OK.

I transformed their rules into positive statements that evening, typed them in large print, and brought them to school the next day. We reviewed the rules and they voted to accept them. They put the pages of rules into booklet form and everyone signed a page that said they agreed with the rules. Through this process they took ownership of the rules.

Sooner, rather than later, rules were broken and we had class meetings to discuss what had happened. We soon discovered that we could not name names in these discussions because that just led to accusations and justifications. It also broke the rule about not hurting people's feelings. So they decided when they had discussions about broken rules they would just talk about the importance of the rule. It was interesting then to note that the person who spoke the most eloquently about the importance of the rule was often the person who broke it the most. This seems to be a stage in moral development and we rejoice when we see that a child has come to this stage of recognizing the importance of the rule and we look forward to the time

when the child can apply it to him or herself. As time went on the children refined the rules and added others as new situations arose.

Since the children had decided upon the rules and, therefore, owned the rules, they seemed to be more mindful about their importance and more willing to try to keep them in mind and live by them, and to help each other to do the same. As time went on more and more of the children were better able to regulate or inhibit their own behavior.

When I became the coordinator at a Montessori public school of 400 children from ages three to eleven, I introduced this manner of having the children make up the ground rules to the teachers of the elementary classes. The elementary ages in that school system were from age six to age eleven. They began this with the children in all the elementary classes at the beginning of the school year. When the school system directed each school to send in a list of their school rules for behavior, the student council of the school, that had representatives from each of the elementary classes, took a copy of the rules from each class and combined them into one set of rules and sent them in to the school system.

Another interesting result of on-going classroom discussions children have about behavior is that, as they get older, they are able to move from thinking about behavior simply in black and white terms to realizing and discussing behavior in terms of shades of gray.

Before describing another experiment, I will give a description of a way to give a lesson in a traditional educational class and its results, then a description of lessons in a Montessori elementary class so you will have some information on how a Montessori elementary classroom differs from the traditional.

Setting the scene: Assume a school system has an official age cut-off date such as a child has to be five years of age by the time the child enters kindergarten. Then imagine a second grade class in which all of the children are seven years old at the beginning of the school year. The school system has a curriculum that must be followed by the classes. It is divided into grade levels and the teachers must complete the assigned curriculum by the end of the school year.

Theoretically, the children could be anywhere from seven years plus a few days old to seven years eleven and half month old. This is a potential age difference of children in the class of almost one year. So some children would have as much as one year more than others of 'life experience.' This would give the older children an advantage.

Then there is also a difference in abilities, which would put some children at an advantage to other children in the class. The 30 children in the class could be roughly divided into thirds as follows:

1, 2, 3, 4, 5, 6, 7, 8, 9, 10,
those with less than average ability

11, 12, 13, 14, 15, 16, 17, 18, 19, 20,
those with average ability

21, 22, 23, 24,, 25, 26, 27, 28, 29, 30
those with more than average ability

Everyone in the class receives the same lesson at the same time. The curriculum would be aimed at the children of average ability. Therefore, the difficulty of the lesson would be approximately right for the ten children in the average ability age range. It would be too easy for the 10 children of higher ability and too difficult for the 10 children with less than average ability.

Results: Maybe satisfactory for the children of average ability. Could be boring for the children with higher ability. They would not need as much time to understand the lesson and, therefore, some of the lesson time would be wasted time for them. Psychologically, they may begin to feel superior to the other children in the class. This can lead to an unhealthy attitude towards their classmates. Could be frustrating for the children with lesser ability because they would need more time to understand the material than could be given to the lesson. They could get to feel like failures day after day after day. Eventually they could come to believe that they were failures and that could become a self-fulfilling prophecy.

This may appear to be an efficient way to deliver a curriculum, but it is a very inefficient way to educate children.

In contrast to this, almost all of the lessons in a Montessori elementary class are given to small groups of children. Groupings of the children depend upon the kind of lesson that is to be given. Some lessons are part of a sequence in which prior knowledge is important. For example, you have to be able to use multiplication and subtraction before you can be introduced to long division so the lesson needs to be given to children who are at approximately the same achievement level. This means that you are never calling all of the seven year olds to a lesson, because some of the seven year olds will not be ready for the lesson, and other seven year olds will already be beyond the lesson. You only call children to the lesson for whom the lesson is appropriate. This is a very efficient way to spend your teaching time. And it is very pleasant for the children because they have the possibility of successfully taking in and using the information given in the lesson.

Being approximately at the same achievement level for a particular lesson does not mean that the children in the lesson will all be about the same age. I remember one child in particular. She was a young six year old whose achievement level in math and geometry meant that she attended those kinds of lessons with nine and ten year olds. If she had simply attended math and geometry lessons only with six year olds she would have been very bored and she would not have had the information she needed in order to use her class time in the most efficient manner.

When prior knowledge is not crucial in a lesson, children with a wider variety of ages and abilities may compose the group for the lesson. Many of the lessons in biology, geography and history fit this description so one puts together a group of children who could work cooperatively together and contribute to the activity as they are able. With children of different abilities and achievement levels, helping each other becomes a natural part of the activity.

When a small group lesson is being given, the other children in the classroom are usually busy doing follow-up work from the lessons they have received. One of the characteristics of this age is that children like to work together. Since the children are free to choose their work and their working companions, they often choose to do follow-up work with one or more children who were together with them in a lesson.

In between lessons, I would do some observing, give help as needed, and prepare for the next lesson.

The second experiment was designed to look at the results of two things:

- First: whether having regular individual conferences with children would help them become able to determine their own readiness for new lessons.
- Second: whether having them choose some of the lessons they would receive would help them feel ownership of their educational process.

Conferences with individual children were held once every two weeks. Children who needed more conferences than that received additional conferences as needed. Lessons were given every day for nine days. On the tenth day, every child in the class received an individual conference. This took the entire day.

When the conferences were held, I had records of the lessons given to each child, any observation notes I had made on the children, and a copy of the Montessori curriculum. The child had his or her daily work

diary or work record, and all the paperwork done since the last conference.

Before the conference the child organized the papers by subject matter and within subject matter. For example, papers regarding multiplication on the large bead frame were arranged together, papers having to do with handwriting practice were in another group, etc.

Content of the Conference was as follows: We reviewed the work together. I made comments on the work such as: I see you have been doing multiplication with a two-digit multiplier on the large bead frame. Do you need more practice on that or are you ready for a three-digit multiplier?

If the child said he or she was ready, the lesson was given early in that next two-week period. If the child was really not ready for the lesson I gave the lesson to the child anyway. The child soon realized that the lesson was too difficult. By the third or fourth conference of the school year, the children knew how to answer that kind of question correctly.

Through this process they become co-evaluators of their work.

The last question in the conference was always, "Is there a lesson you would like to have that we have not talked about?" If the child asked for a lesson that would be appropriate for the child's current achievement level, it was scheduled to occur during the next two weeks.

If the child asked for a lesson that was beyond their current achievement level, I would say, "That is a really good lesson to have, but before we can get to it there are some other things you need to know." I would list the prerequisites and then ask, "Would you like to begin on those?"

With this process the children seemed to develop a feeling of ownership of their work. They became co-evaluators of their work and they participated in planning their work. *Education for them was not just something that was done to them by other people.*

At the end of the conference day each child's records had been updated to show:

- what the child had completed
- what was 'in process'
- what the child was ready for

So what evidence was there to show how these experiments had worked for the children? At the end of the sixth week of school the children voted to extend the school day by an hour. This was a complete

surprise to me. When I asked the children why they wanted to do that, they said that they just wanted to spend more time at school and have more time to do their work. This being a small private school, it had flexibility in determining the hours of the school day, so, from then on, the school day was one hour longer.

Montessori education is creative in many, many ways because it is a response to life. Montessori said

So you see then that we have really a high road to the intelligence. Intelligence moves and is moved by motor activity, and it is true in everything that the child, through this motor activity can learn more precociously and in ways quite different from those we had imagined. We had never seen a child of three years concentrate before, nor had we seen the child tireless in his wish to understand, and all this happens when man builds himself up as he should. It is not the excellence of the Method. It is obedience to the laws of nature. (17th International Training Course, Lecture 18, London, May 1931, page 12.)

And this is what we think we are doing—following the laws of nature.

MEDITATION ON DEPENDENT ORIGINATION

KHENPO NGAWANG JORDEN
International Buddhism Academy, Kathmandu

INTRODUCTION

In modern educational systems, physical sciences have a firm place of importance. Anatomy, for instance, is seen to be useful in teaching students how to understand and how to care for their bodies. Study towards an understanding of the mind, however, and how to care for it through mind-training, does not seem to have much priority. As a consequence, those Buddhist teachings on meditation, or mind-training, which concern the achievement of mental stability in the short-term, and mental transformation in the long-term are a neglected educational resource, even in Buddhist countries.

When considering education in modern Buddhist countries, and the potential use of Buddhist teachings in public education, one must approach the vast array of traditional Buddhist teaching resources carefully. Meditation, or mind-training, is a process of gaining familiarity with the mind. To offer training in developing meditation tools and techniques themselves, without recourse to the question of the meditational focus, or content, may work towards stability in the short-term, but for actual transformation to occur, there needs to be an appropriate focus for meditation.

If meditation is a process of familiarization, we have to ask ourselves what we truly need to become familiar with. In order to guide and mature our intelligent students, it is best to choose content that directly addresses the situation we find ourselves in, and to employ meditation for the purpose of making that situation, in all its correct structure and detail, familiar to the mind.

I believe that it is necessary to go beyond short-term stability, and to consider meditation as the most effective way of making the mind familiar with those information structures that are vital to our transformative potential as human beings on a spiritual path.

The meditation on dependent-arising is truly a template for understanding how our minds (and even our bodies) work, how we got into our present situation, and where we can go from here. A correct understanding of the processes which we undergo in our human

experience, is not only a pre-requisite to the most profound teachings, it is also very useful in itself!

Accordingly, I will present the dependent-arising teachings, and the two meditational structures related to it, as clearly as possible, as a recommendation to apply these excellent teachings within the sphere of modern education.

My paper concerns the forward-sequence and reverse-sequence meditation on the twelve links of dependent-arising, based on Gorampa Sonam Senge's (1429–1489) exposition of this topic. Although Gorampa included the full series of presentations for each of the four major Indian Buddhist Schools, namely the Vaibhāṣika, Sautrāntika, Yogācāra and Mādhyamaka, I will concentrate on the Mādhyamaka school's presentation as the basis for the aforementioned forward and reverse sequence meditations.

THE TWELVE LINKS OF DEPENDENT-ARISING

The Buddha has said

The skillful means by which one may scale the imprisoning walls of saṃsāra and ascend the highest reaches of the mountain of liberation, is none other than the realization of dependent-arising.¹

Māhāyana texts say that the root of saṃsāra is our ignorance concerning 'person', and that furthermore, at the root of this ignorance concerning 'person' is an ignorance of the ultimate mode of all things. These texts explain that the object, to which this ignorance clings, is 'the extremes'. After cutting off these extremes, through the realization of the view of emptiness, all mental afflictions and afflicted karma will cease.

Nāgārjuna said, in his *Mūlamādhyamakakārikā*, "Since there are no phenomena which are not dependently arising, there are no phenomena which are not emptiness."²

He pays homage to the Buddha in his *Mūlamādhyamakakārikā*

Salutations to the perfect Buddha, who is supreme among all speakers. He taught dependent-arising free from annihilation and eternalism; neither going, nor coming; neither separate nor identical; it is the peace which is free from every elaboration.³

1 Gorampa Sonam Senge, *Rten 'brel gyi rnam bzhag 'khor 'das rab gsal*, p.1b.

2 *Mūlamādhyamakakārikā*, Chapter XXIV, verse 19.

3 *Mūlamādhyamakakārikā*, two salutation verses.

Candrakīrti also says, in his *Madhyamikāvatāra*, “This logical reasoning of dependent-arising annihilates the entire web of evil views.”⁴

Having ascertained the sequential manifestation of dependent-arising, together with its sequential reversal, one’s meditation upon these processes of dependent-arising becomes the actual ladder by which one may ascend through the three states of śrāvaka, pratyekabuddha and bodhisattva enlightenment.⁵

Gorampa explains the presentation of dependent origination known to all schools, by means of the individual natures of the twelve links, how they are related as causes and results, and within how many lifetimes these twelve links are fully manifest.

Those phenomena which are designated as ‘phenomena’ are the basis of dependent-arising because they appear in the subjective minds of people, but they are not established as phenomena from their own side.⁶

The meaning of emptiness and the meaning of dependent-arising are ultimately the same. This is because, although in mere conventional appearances, individual causes and results are fixed, things neither arise from no causes, nor from inappropriate causes.

When the reason for the arising of a result from a specific cause is analysed, one will find that, ultimately, results do not arise from causes, because they are free from ‘the four possibilities of arising’.⁷ This is dependent-arising.

The way of meditating on the defiled links of dependent-arising in a sequential way reflects the order in which those links appear in the practitioner’s mind. This way of meditating is consistent with the order of appearance of the defiled links and leads to realization that suffering is the final result of karma and defilement.

The twelve links of dependent-arising are:

1. ignorance
2. karmic formation
3. consciousness
4. name-and-form
5. the six sense perceptions
6. contact

4 Candrakīrti’s *Madhyamikāvatāra*, Chapter VI, verse 114, p.176.

5 Gorampa Sonam Senge, *Rten 'brel gyi rnam bzhag 'khor 'das rab gsal*, pp.1b-2a.

6 *Ibid.*, p.11a.

7 Arising from the cause itself, arising from something other than the cause itself, arising from both, and arising from neither.

7. feeling
8. clinging
9. grasping
10. becoming
11. birth
12. aging/death

The definitions (*mtshan nyid*):

Ignorance is a delusory mental factor which has a way of grasping that is contrary to wisdom-awareness and which also has the ability to motivate defiled actions.

Karmic formation is a defiled action, motivated by ignorance, which has the power to impel consciousness into the next life.

Consciousness is the seed aspect of the ‘All-Base Consciousness’, which holds the latencies of action, if we consider it as the causal aspect of consciousness. When we consider it as the resultant aspect of consciousness, dependent upon one’s causal action, it is the very moment of conception in the mother’s womb.

Name-and-form is the formation of the five aggregates, from the moment after conception.

The six sense perceptions constitute the complete formation of all six of the sense perceptions, through the development of name-and-form.

Contact is a mental factor which discerns the changes taking place regarding the object after the object, sense faculties and consciousness come together. This all takes place after the six sense perceptions have met with the object.

Feeling is a mental factor which experiences pleasure, suffering and neutrality, as discerned by contact.

Clinging is a mental factor which attaches to feelings.

Grasping is a mental factor which attaches to the causes of feeling, such as body and wealth.

Becoming is an intention that accumulates new karma which impels new life. This is based on the ‘two-part cause and effect presentation’ of the 12 links. Based on the ‘one-part cause and effect presentation’ of the 12 links, becoming is a process which makes the potentiality of the karmic latencies powerful after nurturing the previous karmic formations by clinging and grasping.

Birth is the gradual process of formation of the five aggregates at the time of rebirth, due to the power of becoming.

Aging and death: The reason for counting aging and death as a single link is that it is possible to die without aging.

Aging is the transformation of one's physical life into a different form.

Death is the process of ceasing one's faculty of life, exclusively of a single lifetime.⁸

Once the process is set in motion, an inevitable series of transferences of momentum occurs, in one direction only. Each transference is motivated by the previous link in the sequence and each leads into the next link, in the following way:

Although ignorance has no beginning, nevertheless the current ignorance arises from the previous moment of ignorance.

Karmic formations arise due to the condition of ignorance, because, by the power of ignorance, the accumulation of new karma which impels new life, arises.

Due to karmic formations, consciousness arises. This is because, if we consider the causal aspect of consciousness, the later moments of consciousness, which have latencies arise from those previous karmic formations. If we consider the resultant aspect of consciousness, the impelling of consciousness into a birth arises, from previous karmic formations.

Name-and-form arise from consciousness. This is because the gradual increase of the latencies of name-and-form arise from consciousness, which has latencies, if we consider the causal aspect of consciousness. If we consider the resultant aspect of consciousness, the gradual development of name-and-form arises, from the moment after conception in the mother's womb.

The six sense perceptions arise due to the condition of name-and-form. This is because the gradual development of name-and-form leads to the complete formation of the six sense perceptions.

Contact arises due to the condition of the six sense perceptions. This is because, when the six sense perceptions meet with the object, the gathering together of the object, the sense faculties and the consciousness arises. Through this, discernment of changes regarding the object arises.

Feeling arises from contact because, as contact discerns, the experiences of feeling arise.

Clinging arises from feeling because, due to the power of feeling, attachment towards the adoption and rejection of pleasure and misery arises.

8 Gorampa Sonam Senge, *Rten 'brel gyi rnam bzhas 'khor 'das rab gsal*, pp.12a-15a

Grasping arises from clinging because the clinging to feeling gives rise to an aspiration to search for the stimulus of the feeling.

Becoming arises from grasping because, due to the power of grasping, impelling karma which has become more powerful in its impelling capability, arises.

Birth arises from becoming because, due to the power of becoming, one is drawn into different migrations, and into different classes of beings.

Aging and death arise from birth because, due to the power of birth, transformation of one's physical life arises, and ceasing of one's life-force, arises.⁹

Since the twelve links have the nature of cause and result, one may wonder, which of the links are to be seen as essentially causal links, and which are to be seen as essentially resultant links.

Gorampa mentions that, according to the *Abhidharmasamuccaya*, these six: ignorance, karmic formations, consciousness, clinging, grasping and becoming, are essentially causal links. The remaining six are essentially resultant links. Further, according to Gorampa, Nāgārjuna maintains that consciousness is also an essentially resultant link. Therefore, for him there are seven essentially resultant links.¹⁰

The twelve links are also defiled in nature, in the following way:

Ignorance, clinging, and grasping are double-defilements, because they motivate the defilement of karma and they draw the defilement of birth. Karmic formations, consciousness, and becoming are the defilements of karma because they motivate the double-defilements and they draw the defilement of birth.

The remaining six links are the defilement of birth, because they are the ripened nature, which is the result of karma and defilement.¹¹ Nāgārjuna explains that consciousness is also the defilement of birth. "The first, the eighth, and the ninth are the double-defilements. The second and the tenth are the defilement of karma. The remaining seven are suffering."¹²

Vasubandhu in his *Abhidharmakośa*, Maitreya in the *Madhyāntavibhāṅgha* and Asaṅga in the *Yogacara-bhumau vastusamgraha* also explain the defiled nature of the twelve links in the same way that Nāgārjuna did.

9 Gorampa Sonam Senge, *Rten 'brel gyi rnam bzhag 'khor 'das rab gsal*, pp.15a-16a

10 Gorampa Sonam Senge, *Rten 'brel gyi rnam bzhag 'khor 'das rab gsal*, p.16a.

11 Ibid.

12 Gorampa quotes Nāgārjuna in the *Rten 'brel gyi rnam bzhag 'khor 'das rab gsal*, p.16a

The Abhidharmakośa says, “Three links are defilement, two are karma, and seven are bases and also results.”¹³ In the above quotation, ‘defilement’ means double-defilement, ‘karma’ means defilement of karma, and ‘bases and result’ means defilement of birth.

The Madhyāntavibhāṅgha says, “Three and two are defilement and karma. And seven are impure concepts.”¹⁴ In the above quotation, ‘defilement’ means double-defilement, karma means the defilement of karma and ‘the impure concepts’ are the defilement of birth.

Asaṅga’s explanation is based on the given acceptance of the seed aspect of the all-base consciousness. However, the above quotations from Nāgārjuna and Vasubandhu are based on non-acceptance of the all-base consciousness, in reference to this particular presentation.

The Madhyāntavibhāṅgha’s explanation is based on the given acceptance of the ripened aspect of the all-base consciousness.

All of the twelve links of dependent-arising can be subsumed into four branches of impelling and accomplishing, as follows:

1. Ignorance, karmic formations and causal consciousness are the branches that impel.
2. Name-and-form, six sense perceptions, contact, and feeling are the branches of those which are impelled.
3. Clinging, grasping and becoming are the branches which accomplish.
4. Birth and aging are the branches which are accomplished.

If one accepts the idea that there is a cause for ignorance and that there is a result of aging and death, then the number of links must increase. On the other hand, if one accepts the idea that there is no cause for ignorance, and no result of aging and death, then saṃsāra would have an end, ignorance would not be temporary and all other links would be devoid of cause, because there is no cause for ignorance. Also, one would be liberated without effort, after completing one set of the twelve links, because there would be no result of aging and death.

Even though there is a cause for ignorance and there is a result of aging and death, there is still no fault to the ascertainment of the number of the links as being twelve, because that cause for ignorance, and that result of aging and death, belong to another set of dependent-arisings.

The Ratnāvalī says,

13 Abhidharmakośa, Chapter III, verse 26.

14 Madhyāntavibhāṅgha, Chapter I, verse 11.

With these three pathways, mutually causing each other,
 Without a beginning, middle or an end,
 This wheel of cyclic existence turns like a whirling firebrand.¹⁵

During birth, aging and death there is continuity of grasping to the aggregates as truly existent. This grasping is conceptualization, which is the obscuration of knowledge. Every moment of this conceptualization generates grasping to the person as truly existent. This grasping to the person is the ignorance of the twelve links of dependent-arising.

The Śūnyatāsaptati says, “The Buddha said, “The fact that things arising from causes and conditions are conceived as truly existent, is ignorance.” From this ignorance, the twelve links arise.”¹⁶ Thus the ignorance which grasps the aggregates as truly existent is said to be the cause for the twelve links.

Similarly, the Mūlamādhyaṃakakārikā says, “Karma and defilements arise from conceptual thought.”¹⁷

The Ratnāvalī says, “As long as one has grasping to the aggregates, so long will one have grasping to the self.”¹⁸

The Uttaratantraśāstra says, “Karma and defilements always abide in erroneous concept.”¹⁹ Grasping to the aggregates and grasping to erroneous concept is grasping to things as truly existent.

Until one realizes that the aggregates are not truly existent, one will always grasp to things as truly existent. Therefore, this grasping to things as truly existent is ignorance, which is the cause of the twelve links.

When one attains the Path of Seeing, by directly realizing that the aggregates are not truly existent, those śrāvakas who are in training, and those not in training, as well as bodhisattvas on the first seven bhūmis, attach to the aggregates as mere designation. This conceptualization is the obscuration of knowledge, which does not impel defiled karma.

In that way, until one realizes that the aggregates are not truly existent, during the experiencing of the twelve links one always has grasping to the aggregates as truly existent. As a result, one always has the ignorance of grasping to the person as truly existent.

15 Nāgārjuna’s Ratnāvalī, Chapter I, verse 36.

16 Nāgārjuna’s Śūnyatā saptati, pp.118-119, verse 64.

17 Nāgārjuna’s Mūlamādhyaṃakakārikā, Chapter XVIII, verse 5.

18 Nāgārjuna’s Ratnāvalī, Chapter I, verse 35.

19 Maitreya’s Uttaratantraśāstra, Chapter I, verse 56.

Āryadeva, in his Four Hundred Stanzas says, “Just as the sense faculty of the body pervades the entire body, likewise, ignorance exists everywhere. Therefore, when ignorance is destroyed, all the defilements are destroyed.”²⁰

In the instance of the very shortest duration, it is theoretically possible to complete one set of samsaric causal and resultant dependent-arising within two lifetimes, in the following way. Having accumulated impelling karma in the earlier portion of one’s previous life and having nurtured it by means of the accomplishing karma in the later portion of one’s previous life, then in one’s next life, impelled result and accomplished result arise.²¹

In the instance of the very longest duration, it is theoretically possible to complete one set of samsaric causal and resultant dependent-arising within three lifetimes in the following way. Having accumulated impelling karma in one’s previous life and having nurtured it by means of the accomplishing karma, impelled and accomplished results will arise in one’s next life.

The life which accumulates the karma and the life which nurtures the karma do not necessarily arise consecutively. This is because, when one accumulates impelling karma, it is possible that there could be many intervening lives before the arising of the life which nurtures the impelling karma.

The life which is nurtured by accomplishing karma, and the resultant accomplished life, certainly arise consecutively. This is because, when accomplishing karma nurtures impelling karma, the strength of the karma which accomplishes rebirth is made more powerful.²²

The whole of saṃsāra is comprised of nine grounds:

1. the ground of the desire realm
2. the first ground of the form realm
3. the second ground of the form realm
4. the third ground of the form realm
5. the fourth ground of the form realm
6. the first ground of the formless realm known as Limitless Space
7. the second ground of the formless realm known as Limitless Consciousness
8. the third ground of the formless realm known as Nothingness

20 Āryadeva’s The Four Hundred Stanzas, Chapter VI, verse 10.

21 Gorampa Sonam Senge, *Rten 'brel gyi rnam bzhag 'khor 'das rab gsal*, p. 19a.

22 Ibid., pp.19a-19b.

9. the fourth ground of the formless realm, known as The Peak of Cyclic Existence

Transmigration of sentient beings to these nine grounds can be subsumed into three categories:²³

1. transmigration to the same ground from which one has departed
2. transmigration to a higher ground from a lower ground
3. transmigration to a lower ground from a higher ground

If this categorization is elaborated, then there are eighty-one possibilities of transmigration. This is because, from the nine grounds, nine transmigrations are possible to the single ground of the desire realm. Likewise, from the nine grounds, nine transmigrations are possible to each of the four grounds of the form realm. Similarly, from the nine grounds, nine transmigrations are possible to each of the four grounds of the formless realm. Thus the total number of possibilities of transmigration is eighty-one.²⁴

From these twelve links, only the later eleven, excluding ignorance, are included in the ground where one is born. This is because the six links (or seven, when consciousness is counted as a ripening result) of the ripening result must be identified as the defiled aggregates of one's present life.

Furthermore, the impelling karma from one ground cannot impel a ripening result in another ground. Nor can the accomplishing karma belonging to one ground accomplish a ripening result in another ground. Ignorance belongs to the ground where one is to be reborn. For rebirth, there are nine possibilities.

One will be reborn in the desire realm from nine grounds. The reason is that, the ignorance belonging to the higher realm cannot motivate impelling karma to the desire realm. This is because, until one attains the actual mental state of a higher realm, the ignorance of the higher realm will not manifest.

Also, it is not possible to accumulate the karma to impel to the desire realm, once one has obtained the actual mental state of the higher realm, and maintains it undiminished, because the desire realm is seen to be inferior.

In brief, regarding ignorance, there are four possibilities:

²³ Ibid., p.23b.

²⁴ Gorampa Sonam Senge, *Rten 'brel gyi rnam bzhag 'khor 'das rab gsal*, p.23b.

1. Ignorance belonging to both the grounds of birth and death is exemplified by a person taking rebirth in the desire realm from the desire realm.
2. Ignorance belonging to the ground of birth but not to the ground of death is exemplified by a person taking rebirth in the desire realm from eight other grounds.
3. Ignorance belonging to the ground of death, but not belonging to the ground of birth, can be exemplified by persons taking rebirths to eight remaining grounds. These would be, for example, a person taking rebirth from the desire realm to the first dhyana of the form realm, and so on, up to 'the peak of cyclic existence' of the formless realm.
4. Ignorance that does not belong to either ground, is exemplified by all remaining permutations of the eighty-one possible rebirths.

These explanations are given, based on the ignorance of the mental consciousness which motivates. However, if it is the ignorance which is the follower of the defiled mind, it must belong to the body which has accumulated the karma. This is because the defiled mind focuses on the all-base consciousness and grasps it as self. This being so, it is not possible that the defiled mind grasps the all-base consciousness of another place as self.

Pure dependent-arising: in general, the later moments of the path to liberation arising from the earlier moments of the path to liberation and the truth of cessation arising in dependence on the truth of path, and so forth, are the pure dependent-arisings. This is because, these resultant pure dependent-arisings come into being from the pure causal dependent-arising. Both the cause and the result are pure.

With regard to these pure causes and results, the very cause does not transform into the nature of result and the result does not arise without depending on the cause. However, the certainty of the dependence of these results to these causes cannot bear examination with logical reasoning. However, on the conventional level, causes and results having a specific fixed relationship,²⁵ comprises the complete meaning of dependent-arising.

If we consider that pure dependent-arising manifests in the place where the defiled links of dependent-arising cease, then there are two possibilities of this manifestation:

25 Here the specific fixed relationship means, a barley sprout only growing from a barley seed. For instance, if lion cub were to be born from an elephant, it would be an unknown animal!

1. the stages of ceasing the links of dependent-arising of ordinary beings and the trainees of śrāvakas, and pratyekabuddhas.
2. the stages of cessation of the defiled links of dependent-arising of sravakas and pratyekabuddha arhats and noble bodhisattvas.

This first point is made clear by Nāgārjuna in his *Mūlamādhyamakakārikā*, “With the cessation of ignorance, karmic formations will not arise. The cessation of ignorance occurs through meditation and knowledge of suchness.”²⁶

Thus, karmic formations will not arise because ignorance has ceased. Having identified the cause of ignorance in this way, then Nāgārjuna further said, “By the cessation of ‘such and such’ cause, ‘such and such’ result will not arise. This mere heap of suffering will thereby utterly cease.”²⁷

Thus it is taught that after the karmic formations cease, the later links will cease in forward sequence. According to this *Mādhyamaka* presentation, meditation on suchness is the cause for the cessation of ignorance. This is the meditation on the ultimate view of the realization of ‘selflessness of person’. In order to understand this, one must realize the ultimate non-existence of one’s aggregates. In this way, the ordinary beings and the trainees of śrāvakas, and pratyekabuddhas attain the ‘path of seeing’, and so on.

The second point, of the cessation of the dependent-arising of the śrāvaka and pratyekabuddha arhats and noble Bodhisattvas is that, although they do not have the defiled twelve links, they have a similar twelve links arising from a latent propensity of ignorance and undefiled karma, which will not cease until the attainment of Buddhahood. This is because they have not eliminated the latent propensity of ignorance.

It is mentioned in the *Uttaratantra* that:

These individuals have the latent propensity of ignorance and undefiled karma from which the mental nature of birth and aging, of undefiled karmic formation, the illness of subtle latent propensities and inconceivable transforming death occur. Since the sublime Buddha has eliminated these four, he has attained eternity, nobility and so forth.²⁸

One may wonder about what the twelve links of these noble beings are and when they cease. Their ignorance is a latent propensity of ignorance, their karmic formations are undefiled karma, their virtue and

²⁶ *Mūlamādhyamakakārikā*, Chapter XXVI, verse 11.

²⁷ *Ibid.*, verse 12.

²⁸ Gorampa quoted the *Uttaratantraśāstra*, in the *Rten 'brel gyi rnam bzhag 'khor 'das rab gsal*, p.26b

accompanying afflictions of the wish to take rebirth for others' benefit are the three links: craving, grasping and existence. From these links, the other links: name-and-form, six sense perceptions, contact and feeling, which constitute mental nature, are born. That birth is the birth of mental nature. The momentary ceasing of the birth of mental nature, followed by a momentary arising of it, is karmic formation. The inconceivable transforming death of these noble beings is: birth, aging and death.

These twelve links will cease when the vajra-like samādhi at the end of the continuum destroys the two obscurations, along with the latent propensities. That latent propensity of ignorance having ceased, the later links all cease and the four perfected qualities of omniscience, eternity, double-purity, and complete bliss will be attained.

The reversal sequence comes from birth, in a reverse of the order by which karmic formations have manifest, ultimately from ignorance. This reverse-sequence way of meditating on the defiled dependent-arising reverses the order in which dependent-arising appears in the minds of practitioners. The purpose of this is to realize that ignorance is the final root of suffering.

Meditating on the cessation of ignorance, which arises from the cessation of karmic formations, and so on, up to the cessation of birth, aging and death, is forward-sequence meditation on the perfectly pure dependent-arising. This is because, the sequence of dependent-arising appearing in the minds of practitioners, and the manner in which the perfectly pure dependent-arising manifests, are consistent. The purpose of this meditation is to realize the truth of cessation, which is the final result of practicing the path.

Meditation on the cessation of birth, leading to the cessation of aging and death, and so on, up to the cessation of ignorance, leading to the cessation of karmic formation is the reverse-sequence meditation on the perfectly pure dependent-arising. This is because the order of perfectly pure dependent-arising appearing in the minds of practitioners and the manner in which the perfectly pure dependent-arising manifests are inconsistent. The purpose of this meditation is to realize the final root of nirvāṇa, the abandonment of saṃsāra which is the awareness-wisdom, the complete opposite of ignorance.

In brief, due to the condition of the seed, the sprout, and so on, arises. This is the external dependent-arising. Due to the condition of ignorance, karmic formations, and so forth arise. This is the internal dependent-arising. All these are on the conventional level. Even though one accepts cause and result, when these causes and results are analysed as being one or different, permanent or impermanent, entities

or non-entities and so forth, if any one of these extremes of analysis is accepted, then one becomes a proponent of the system of True Existence.

The Mādhyamaka School does not accept any of the extremes, it only accepts the way things appear due to causes and conditions. Defilements, karmas and ripened results are without beginning or end. If cyclic existence is well understood in this way, the wisdom which realizes that there is no arising and no cessation, cuts through it.

Everyone who is interested in meditation, should pay attention to Vasubandhu's statement: "Abide in sound moral conduct, endowed with much learning and contemplation. Then engage completely in meditation."²⁹

In particular, one should first meditate on the aforementioned twelve links of dependent-arising and focus on their forward-sequence of arising. Once one becomes familiar with the identities of each link and how each link arises due to causes and conditions, yet having no intrinsic nature, one will have a firm experience of how dependent-arising and emptiness are inseparable.

After this is established, one should meditate on the reverse-sequence of the twelve links of dependent-arising. In this meditation, with all the aforementioned prerequisites, one's focus should be on the reverse-sequence of cessations of each of the twelve links. Then one will have a good understanding of how we wander in saṃsāra, endlessly. Yet, intrinsically, saṃsāra neither arises nor disintegrates and this is the clear portrait of the non-differentiation of saṃsāra and nirvāṇa.

REFERENCES

- Abhidharmakośa of Vasubandhu, (Collection of Philosophical Root Texts) Prajñā Publications Vol. 1, Dehradun, India, 1984.
- Candrakīrti's Madhyamikāvatāra, (Collection of Philosophical Root Texts) Prajñā Publications, Vol. 1, Dehradun, India, 1984.
- Catuḥśataka of Āryadeva, (Collection of Philosophical Root Texts) Prajñā Publication, Vol. 1, Dehradun, India, 1984.
- Gorampa's *Rten 'brel gyi rnam bzhag 'khor 'das rab gsal*, (Collection of Gorampa's Writing) Taiwan Edition, Vol. 7, Taiwan, 2001.
- Middle Beyond Extremes (Madhyāntavibhāga of Maitreya), Dharmachakra Translation Committee, Snow Lion Publications, N.Y., 2006.

²⁹ Abhidharmakośa, Chapter VI, verse 5.

- Mūlamādhyaṃakakārikā of Nāgārjuna, (Collection of Philosophical Root Texts), (Collection of Philosophical Root Texts) Prajñā Publications, Vol. 1, Dehradun, India, 1984.
- Ratnāvalī, (Precious Garland and The Song of the Four Mindfulnesses, Wisdom of Tibet series #2), translated and edited by Jeffrey Hopkins and Lati Rinpoche with Anne Klein, Vikas Publishing House, India, 1975.
- Śūnyatāsaptati, (Seventy Stanzas on Emptiness), trans. C. Lindtner. In Lindtner, *Master of Wisdom*. Oakland: Dharma Press, 1986.
- Uttaratantraśāstra of Maitreya, (Uttaratantra Root Text and Commentary), Sichuan Peoples' Publishing House, China, 1995.

NOTES ON CONTRIBUTORS

BALMIKI PRASAD SINGH, H.E. the Governor of Sikkim (MA Political Sciences) is a distinguished scholar, thinker and public servant. He was appointed to the Indian Administrative Service (IAS) in 1964. He has since been the recipient of several awards and fellowships, including the Jawaharlal Nehru Fellowship (1982-84) and Queen Elizabeth Fellowship (1989-90). He was Mahatma Gandhi National Fellow at New Delhi. Shri. B.P.Singh is recipient of Gulzari Lal Nanda Award for Outstanding public service from the President of India in 1998 and Man of Letters Award from His Holiness the Dalai Lama in 2003.

Over the past four decades Shri B.P. Singh has held a variety of important positions within Assam as well as in the Government of India. He was Additional Secretary, Ministry of Environment & Forest (1993-95), Culture Secretary (1995-97) and Home Secretary (1997-99) in Government of India. As an international civil servant, Shri B.P. Singh served as Executive Director and Ambassador at the World Bank during 1999-2002 representing India, Bhutan, Bangladesh and Sri Lanka. He was Chancellor of the Central University of Tibetan Studies, Sarnath for six years and Chief Editor of the South Asia Series on “Perspectives on Economics, Technology and Governance” of Oxford University Press, New York.

Shri B.P. Singh has authored six books (i) *Threads Woven: Ideals, Principles & Administration*, LBS Guwahati, 1975, the *second edition* published by Allied Publishers, New-Delhi in 2010 (ii) *The Indian National Congress and Cultural Renaissance*, Allied Publishers, New Delhi 1987 and the *second edition* in 2010; (iii) *The Problem of Change: A Study of North-East India*, Oxford University Press, New Delhi, 1987 and *latest reprint* in 2010; (iv) *India's Culture: the State, the Arts and Beyond*-Oxford University Press, New Delhi 1998 and the *second edition* in 2010; (v) *Bahudha and the post-9/11 World*; Oxford University Press, New Delhi, 2008; and (vi) *Our India*, NCERT, New Delhi, 2011. He is also Chief Editor of the *The Millennium Book* on New Delhi, OUP (2001). In addition, Shri B. P. Singh has published several monographs and articles on politics, culture, ecology and governance in reputed Indian and foreign newspapers and journals.

MEENAKSHI THAPAN Professor of Sociology at the Delhi School of Economics, University of Delhi, was awarded her Ph.D by the University of Delhi in 1985. She has taught at the University of Delhi since 1986 and at the Department of Sociology, University of Chicago in 1995 and at the University of Richmond in 2008. At present, she is Co-ordinator of the European Studies Programme at the University of Delhi. She is on the editorial boards of *Body and Society* and *Diaspora, Indigenous, and Minority Education*. She has conducted fieldwork in a residential school in southern India, a slum in Delhi, government and private schools in urban Delhi and Ahmedabad, and schools in Vancouver and Paris. Her research interests have focused on the sociology of education, and schooling in particular, and women's lives and gender relations in urban schools and slums, women's experience of embodiment and women's magazines, and more recently, on migration and identity in India and in Europe. Her publications include *Life at School. An Ethnographic Study* (Oxford University Press, 1991, 2006); (edited) *Embodiment. Essays on Gender and Identity* (Oxford University Press, 1997); (edited) *Anthropological Journeys. Reflections on Fieldwork* (Orient Longman, 1998); (edited) *Transnational Migration and the Politics of Identity* (Sage, 2005); (co-edited with Roland Lardinois) *Reading Pierre Bourdieu in a Dual Context: Essays from India and France* (Routledge, Taylor and Francis, 2006). Her most recent publications are *Living the Body: Embodiment, Womanhood and Identity in Contemporary India*. (Sage, 2009) and (edited) *Contested Spaces. Citizenship and Belonging in Contemporary Times*. (Orient Blackswan, 2010). She is also Series Editor of a five volume series on *Women and Migration in Asia* (Sage, 2005-2008).

ADELE DIAMOND is the Canada Research Chair Professor of Developmental Cognitive Neuroscience in the Psychiatry Department at the University of British Columbia, Vancouver, Canada. She received her BA from Swarthmore College Phi Beta Kappa (in Sociology-Anthropology and Psychology), her PhD from Harvard (in Developmental Psychology), and was a postdoctoral fellow at Yale Medical School with Patricia Goldman-Rakic (in Neuroanatomy). Prof. Diamond is one of the pioneers who founded the field of Developmental Cognitive Neuroscience. Her specialty is the complex cognitive abilities, such as attention, self-control, and mental flexibility (collectively called 'executive functions') that depend on prefrontal cortex. She studies the modulation of executive functions by biology (genes and neurochemistry) and by the environment (including

effective programs to aid their development), how they become derailed in disorders (e.g., ADHD or autism), and how to prevent or ameliorate such disorders. Recently she has turned to the possible roles of the arts and physical activity in improving executive functions, academic outcomes, and mental health.

Prof. Diamond's research has changed medical guidelines worldwide for the treatment of PKU (phenylketonuria) and for the inattentive type of ADHD. Her 2007 *Science* paper, showing that executive functions can be improved in young children in regular classrooms and that play seems critical, ignited worldwide interest. She created and organizes a popular biennial conference for the general public on "Brain Development and Learning Conference." For the conference and her other social-action work she received two awards in 2009: YWCA Woman of Distinction Award and the Inaugural Distinguished Achievement Award for Service to the Community from the Faculty of Medicine, UBC. In recognition of her research accomplishments she has been elected a Fellow of the Royal Society of Canada and of many scientific associations, and was named one of the "2000 Outstanding Women of the 20th Century,"

JEAN K. MILLER received an MA (1974) and a PhD (1981) in Education from Case Western Reserve University in Cleveland, Ohio and Montessori Diplomas from the Association Montessori Internationale (AMI) for working with children ages 2 ½ through 12 (1969, 1979). After extensive experience working with and observing children ages 2 ½ to 12 in both public and private Montessori Schools and further training from AMI, Dr Miller became a teacher trainer and consultant for AMI. She has trained Montessori teachers in Australia, Canada, India, Italy, and the USA. In addition to training Montessori teachers she travels extensively, giving workshops and doing school consultations in Asia, Australia, Europe and North America. Additional current interests include Action Research by Montessori teachers in Australia, studying various methods for improving Montessori teacher training, an Aboriginal adolescent Montessori program in Australia, and experimenting with helping elementary aged children understand how their brains work so they can participate in their own education in a more efficient and joyful manner. She has recently participated as a writer for the publication of the official Montessori curriculum for the education department of the country of Australia.

KHENPO NGAWANG JORDEN received ordination and training in ritual texts and full ritual arts at *Sa-ngor-tsar-gsum* monastery, Sikkim, under the guidance of the late Venerable Jamyang Nyima and the late Venerable Khenpo Lodo Sangpo. He later attended Sakya College, Dehradun, India, achieving *Bka' bcu pa* (1982) and *Slob dpon* (1984) degrees. After teaching at Sakya College, he attended American universities to improve his English language skills. At Harvard, he studied Comparative Religions, receiving the M.T.S (Master of Theological Studies, 1991) and Ph.D in Indo-Tibetan Studies, (2003) with Harvard's Department of Sanskrit and Indian Studies. His Ph.D dissertation was titled, *Buddha-nature: Through the Eyes of Gorampa Sonam Senge in Fifteenth Century Tibet*. After ten years of teaching, at Harvard and at the University of Chicago, he accepted a permanent appointment (2009) as Director and Principal of the International Buddhist Academy in Kathmandu, Nepal, at the requests of His Holiness, the Sakya Trizin, and Dr Jordan's revered Sakya College teacher: the IBA's founder, the Most Venerable Khenchen Appey Rinpoche. Dr Khenpo Jordan is currently training approximately 40 monastic and non-monastic scholars in two translation programs at IBA, where he has also taught summer courses annually, since 2001, on texts of the early Indian Buddhist Masters. Dr Jordan is currently translating Gorampa's *General Exposition on Madhyamaka Philosophy (Dbu ma spyi don)*, editing his dissertation for publication, and editing the Abhidharma commentary by *Gorampa Sonam Senge*, which focuses on the presentation of *skandhas, dhatus and ayatanas*.