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Learning about Oneself

Questioner: Could you describe how you are aware that you are inattentive?

KRISHNAMURTI: I am learning about myself, not according to some psychologist or specialist. I am watching and I see something in myself but I do not condemn it, I do not judge it, I do not push it aside—I just watch it. I see that I am proud. Let us take that as an example. I do not say, 'I must put it aside, how ugly to be proud' but I just watch it. As I am watching, I am learning. Watching means learning what pride involves, how it has come into being. I cannot watch it for more than five or six minutes—if one can, that is a great deal. The next moment I become inattentive. Having been attentive and knowing what inattention is, I struggle to make inattention attentive. Do not do that, but watch inattention, become aware that you are inattentive—that is all. Stop there. Do not say, 'I must spend all my time being attentive', but just watch when you are inattentive. To go any further into this would be really quite complex. There is a quality of mind that is awake and watching all the time, watching though there is nothing to learn. That means the mind is extraordinarily quiet, extraordinarily silent. What has a silent, clear mind to learn?

J Krishnamurti, *The Impossible Question*, Penguin Arkana, @ Krishnamurti Foundation Trust, U.K.

Contents

Journal of the Krishnamurti Schools

No. 14, March 2010

An Educational Journal

This is a journal on education that is brought out annually. It is an anthology of writings by educators, teachers and thinkers exploring a new vision of education in its many dimensions—philosophy, psychology, classroom experience, curriculum, nature and environment and contemporary issues. It lays special emphasis on J.Krishnamurti's principles of education. It will be of use to teachers, parents, educational administrators, teacher-educators and to any individual interested in education.

Please note: The Journal of the Krishnamurti Schools No. 15 will be published in January 2011 The Order Form is included in this journal.

Editorial

This is the fourteenth issue of the Journal and what started as an in-house exchange between the various Krishnamurti schools has, over the years, slowly and quietly found a wider audience. The voice of the Journal is quiet, deep and intense. It is the voice of passionate practitioners of Krishnamurti's insights into education, as also of those who have just joined these schools and are tentative, unsure and gentle in their exploring. It is also the voice of those who reflect on contemporary society and dwell on how these insights may act on that society.

One of the most interesting aspects of the Journal from the first issue to this one is that there is never a sense of conclusion and finality about the matters explored. Frameworks and principles do emerge but have never crystallized into a *methodology*. While there is a tremendous amount to be learnt and adapted to one's own teaching practices, one always tweaks, changes, doubts, and questions what one reads. On a lighter note, the autonomous, independent character of each of the Krishnamurti schools is seen in the fact that there isn't a shared chant, or assembly song which is sung in an identical manner across the schools! This is both exhilarating and frustrating. And the freedom to explore has been one of Krishnamurti's greatest gifts to these schools. In that sense, the Journal is a reflection of the teachings—like any institution, a teacher may wish to settle down, but cannot.

A 'new' feature in the Journal this time is that the Editors' single article has become several articles. This year each one of us has taken a keyword or phrase in school education and examined it, unravelling its meanings. Themes chosen are discipline, work and leisure, knowledge and creativity.

There are several articles here on curriculum and practice. Three of these are on social studies, with a special emphasis on history. One documents the visit to three temples and a mosque, the basis of an exploration not meant to be academic, but direct and immediate. The second describes a comparative study of ancient Greece and modern Banaras to understand 'the distinctiveness of cultures and human values'. While these projects involved ten-and

eleven-year-olds, a course for 12th grade students on religion, culture and ethics at the Oak Grove School explored and investigated not only the religions of the world and modern atheism but through them the 'contradictory theories on the meaning of life and right action'. Two more articles from Oak Grove School present us with a seeming paradox, so typical of all our schools. While one is a possible 'framework' for a Krishnamurti school to include enquiry, communication, academia, engagement, aesthetics, caring and relationship, there is also a report on a two-week programme called 'Teaching Academy' on how educators 'learn and explore the art, science and craft of teaching without recourse to methodologies' because a method, no matter how liberal, is ultimately prescriptive. This section also includes articles on the possibility of a non-competitive sports programme which can still be rigorous and dynamic, and how a discussion can be fostered in a mixed-age classroom enquiry into which is the larger sum of numbers, odd or even, between 1 and 100.

Another set of articles explores more general concerns in education. One makes a strong case that the education of values in schools is too important an issue to be left 'to chance or to the experts', because values are learned and acquired in the context of relationship between individuals and groups. The concern of another educator is to involve 'parents and to integrate home life with the schooling experience' for the well-being of a child. In *Educating Romeo* a forty-six-year-old male teacher dons the persona of a 'typical' male seventeen-year-old he has to look after in school. The world of the seventeen-year-old is dominated by a search for an identity and getting ready for an adult world seems both exciting and scary. To this young man the teacher has to reveal the importance of dialogue in a meaningful education to discuss life and living, while respecting biological changes in young people and helping them discover their passions.

In *Educating for the Art of Living* the writer suggests that unless we want to fall into habitual and mechanical patterns of thought one has to constantly ask: What is the essence of education? In a seemingly indifferent universe, pragmatism, survival, materialism, competition and progress are dominant principles. Krishnamurti, however, talks of learning the art of living where '*the whole can function* totally'. Discovering whether this art really exists is a challenge for ourselves. Also in a philosophical vein, *Science and Religion* calls upon teachers especially to grapple with philosophical issues, lest one teach out of 'unexamined conditioning'. There is an exploration of the fundamental

assumption in all religions: of the sacred and the profane as divisions of reality. Science helps us see the values in nature—the 'sacred *what is* which does not profane'. In 'Krishnamurti and Deep Ecology', Krishnamurti's writing about nature is looked at in the light of 'deep ecology', a philosophical movement with a broad base, including people as diverse as M K Gandhi and William Wordsworth. Krishnamurti believed in the intrinsic worth of living things, and also believed that it was possible for human beings to restore their relationship with nature by 'connecting the transformative power of perception to the inner life of the mind'. This is what deep ecology calls the 'great ethic'—the 'seemingly simple act of stepping outside our psychological frameworks'.

A line from *The Awakening of Intelligence* captures the essence:

An interval of time separates man from nature.

VIJU JAITHIRTHA

Krishnamurti and Deep Ecology

Radhika Herzberger

Deep Ecology, a current philosophical movement initiated by the Norwegian philosopher Arne Naess in 1972, is shaping the environmental debate by asking fundamental questions about who we are and what human progress means rather than searching merely for technological fixes. In 2002, P S Ramakrishna, professor of ecology at the Jawaharlal Nehru University (JNU) in New Delhi, suggested that we represent J Krishnamurti as a Deep Ecologist. Professor Ramakrishna's chance observation helps construe Krishnamurti's writing about nature in the light of this debate.

Arne Naess described three alternate tenets that might underpin the term he had coined '*…within deep ecology you have those who specialize on a spiritual level, saying you have to change the way you are mentally, others say no, all the problems in deep ecology are political more or less, you have to go into politics and the third one just utters ah, wonderful nature, wonderful nature, wonderful nature.*'[1]

Since the term Deep Ecology has very broad usage and, as Arne Naess indicates, encompasses thinkers as different as Mohandas Gandhi, the Romantic poet Wordsworth of the Preludes *('..what we have loved, / Others will love, and we will teach them how')*, Vedantic concepts of self-realization and population theories of Paul Ehrlich, what does it mean to describe Krishnamurti as a 'Deep Ecologist'?

The primary meaning of the phrase is fairly straightforward: '*The well-being and flourishing of human and non-human life on Earth have value in themselves (synonyms: intrinsic value, inherent worth). These values are independent of the usefulness of the non-human world for human purposes.*'[2] And in this primary sense Krishnamurti is certainly a Deep Ecologist because he believed in the intrinsic worth of living things.

At a deeper level, he believed that human nature held out the immediate and perennial possibility of restoring its relationship with nature. In the lost relation between modern humans and nature, Krishnamurti in fact saw the opportunity for the re-awakening of a 'great ethic' (the phrase is Arne Naess'). And that opportunity is summed up in a sentence that makes the right relationship with nature a seemingly simple act of stepping outside our psychological frameworks, dominated as these are by a pursuit of short-term goals, resulting in an exploited Earth losing its ability to support life systems:

An interval of time separates man from nature.[3]

The seemingly easy sentence holds out the promise of transforming psychological time, which arises from the great storehouse of personal memories, societal norms, and biological instincts that constitutes the human psyche. Krishnamurti sought to reconfigure moral discourse about nature by connecting the transformative power of perception to the inner life of the mind. *'To look—or to listen—is one of the most difficult things in life.'*[4] It is difficult because *'If your eyes are blinded with your worries, you cannot see the beauty of the sunset*. [And so] *most of us have lost touch with nature.'*[5] The single word 'worry' here does duty for all that constitutes a barrier between human beings and nature.

'Human beings are adapted by Darwinian natural selection,' the well-known biologist E O Wilson contends, *'to short-term decisions and focus on local concerns.'*[6] Wilson recognises that science cannot solve the self-centred and exploitative way in which human beings engage with nature. But whereas Wilson invokes the atavistic instinct we share with the whole of life as the path to redemption: *'Every species, right down to nematode worms, has pretty elaborate behaviour that leads them to the right habitat at the right time. Shouldn't we find some residue of that instinct in human beings? . . . On some level, it is wired into us to be around nature. We should not let that instinct disappear,*[7] Krishnamurti appeals to humanity's capacity for empathy and altruistic action. Even though the biological support for altruism is disputed, he believes that human beings, if rightly educated, are able transcend their conditioning.

Krishnamurti and nature

Throughout Krishnamurti's writing we find an ancient and sacramental sense of the Earth's beauty, her abundance and her mystery. To look at nature through

Krishnamurti's writing is to perceive natural phenomena—the extraordinary blue of the Mediterranean, the owl that hoots on the hill, the shadows of leaves and the patterns of clouds in their vital singularity.

Asit Chandmal relates how, sitting next to Krishnamurti in an aeroplane flying the polar route from London to Los Angeles, he came to photograph a lone glacier along the featureless, snowbound landscape. At a certain point in the course of the flight Krishnamurti remarked,

'In a few minutes, to your right, you will see an ice formation that casts a shadow like a cathedral.'

The hostess, overhearing the conversation, says, 'There are no landmarks or icebergs here.'

'Wait,' Krishnamurti persisted, 'You will see.'[8]

The photograph of the iceberg with the cathedral shadow across a desolate snowscape appears in the Introduction to *One Thousand Moons.* The image is a testament to Krishnamurti's perceptual memory and to the acuity of his vision. And this acuity is a consequence of Krishnamurti's discovery of a holistic and integrated way of seeing; it lies at the base of his search for the long vision necessary to re-establish a right relationship between human beings and nature.

Krishnamurti's education in England had left him with an abiding love of nineteenth century Romantic poetry. Arne Naess was possibly caricaturing the romantic perspective on nature as *'ah, wonderful nature, wonderful nature, wonderful nature'*. Krishnamurti's idea of nature, however, was not merely an awestruck appreciation of the natural world, nor was it the partial vision of someone longing for a return to pastoral beatitudes. Nostalgia is sustained generally by banishing the darker side of nature, by a reluctance to acknowledge cruelty, competition or the pain that is so much a part of life on Earth. But Krishnamurti observed the darker side of nature with an equally keen attention to detail:

> *The bloated carcass of some large animal came floating by, and several vultures were on it, screeching and tearing at the flesh. Others wanted their share, but they were driven off with huge, flapping wings, till those already on the body had had their fill. The crows, furiously cawing, tried to get in between the larger, clumsier birds, but they had no chance. Except for this noise and flutter around the dead body, the wide, curving river was peaceful.*[9]

Nor was he trying to revive here a more ancient vision of nature inspired by Vedanta, according to which the individual *per se* is illusory and the individuality of each thing in nature reflects a higher reality. There is no sense in his writing that parrots and orioles are worthy of our attention because their presence is infused with a harmony and beauty that lie beyond the physical. On the contrary, harmony and beauty are, for him, part of an order inherent in nature:

> *Under the bushes two king snakes, with their dark brown rings around the length of their bodies, were curling around each other, and as they passed close by they were utterly unaware of a human presence. They had been on a shelf in the shed, stretched out, their dark, bright eyes watching and waiting for the mice. They stared without blinking for they had no eyelids. They must have been there during the night and now they were among the bushes. It was their ground and they were seen often, and on picking up one of them, it coiled around the arm and felt cold to touch. All those living things seemed to have their own order, their own discipline and their own play and gaiety.*[10]

Setting apart the sensuous realm as lower, superseded by a higher transcendental one, turning away from the ugly towards the beautiful in nature—none of these attitudes mark Krishnamurti's thought. This non-divisive observation evident in his nature writing carried over to the human scene, where he observed the office clerk, the successful politician, the society lady in high heels and 'the elderly man, pious, and eager for sympathy and blessing', without contempt, with the same detached tenderness which he felt and expressed for all creatures of the Earth.

At an even deeper level, he observed without judgment the human mind, with its strange twists and turns—completely, simply, as if it were also 'a part of the Earth'. For him a non-divisive perception lay at the secret heart of transforming the relationship of a human being to him/herself, to society and to Nature

Reconfiguring moral space

Krishnamurti sought to reappraise humanity's isolation from nature and, in the process, to break the divide. The word 'nature', for him, included the non-manmade world as we perceive it through our senses, the oceans, mountains, rivers and vast plains in which life evolved, but also inner natures, the wildness that lies dormant or active in each human: competitiveness, fear,

anger and greed. He attributes our 'second expulsion from Eden' (a phrase used by James Lovelock to describe the catastrophic changes brought on by climate change) to the inept gardener in us who seeks to tame the wilderness within. Take jealousy or greed, qualities that are at the root of exploitation, for instance:

> *If you nip it [jealousy], it will never flower, it will die quickly. If you let it blossom, then it shows you the colour, the delicacy, the pollen, everything. It shows what it actually is without your being told it is red, it is blue, it has pollen. It is there for you to look at. In the same way, if you allow jealousy to flower, then it shows you everything it actually is. . .*[11]

The weeds that the gardener removes, the bushes he shapes and the flowering buds he nips impose a certain order, but the artificial garden lacks diversity: it is static, held within a pattern. Meanwhile, the gardener remains trapped in his predetermined idea of an ideal garden he has created with the help of toxic materials, in disregard of the Earth and the life forms on it.

Krishnamurti identifies 'the interval of time' that divides individual human beings from nature with the ideal self-image embedded in the human psyche. He uses the word 'ideal' phenomenologically, through careful reference to the workings of the mind. When, in observing violence in ourselves, we project the ideal of non-violence in the form of a prescription or a long-range goal, we move away from the fact of our own violence. In projecting the ideal, we partition ourselves into what we are and what we aspire to become, inevitably turning attention away from what we actually are, towards the more agreeable image of higher aspirations. Instead, if we are able to look at the negative impulses without that interval of time, i.e. without projecting an ideal image of the future self, we end the division between our own nature and what ought to be.

Krishnamurti is asking us to do something very significant, and that is to observe the meddling gardener, the observer who converts the wilderness into discrete objects, and, standing apart as subject, manipulates the landscape. He implies that when the mind silently, without division, observes itself and the world, it is in communion with nature. This non-divisive attention is the true source of compassion, and also the source of a feeling of responsibility towards all living things. A mind that is free of psychological time is part of nature; it is

> *. . . like a flower full of scent which doesn't share, but is always there for any passer-by to delight in. And whether anyone is very near in the garden, or very far away, it is all the same to the flower, because it is full of that perfume and, so, it is sharing with everything. If one could come upon this, it is really a mysterious flower.*[12]

His teachings in this way hold an extraordinary sense of human possibility. 'A lovely rose is a lovely rose,' he wrote, 'but we human beings have been given the capacity to think, and we think wrongly.'[13]

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Educating for the Art of Living

Javier Gomez Rodriguez

What is education about? In what general context does it find its meaning, its raison d'être? What is its essence? These are old questions that we must keep asking lest we fall into mechanical and mindless patterns of institutional operation. It may sound too much like a platitude to say that its broadest context is life itself and that its essence is learning. This may be obvious and acceptable to everyone but the meaning of living may not be so self-evident and, to judge by the way we live, the true nature of learning is escaping us as well. So in the end we cannot pretend to ourselves that we have answered the question and we must look more closely into it.

It would seem that in our modern sophisticated world and following on the footsteps of science, mainly biology and physics, we tend to view life as the product of chance, with no discernible deeper purpose. The overall decline of religion worldwide has added fuel to the gathering existentialist angst of man in the face of a seemingly indifferent universe. The attempted replacement of the theological outlook with a neo-Darwinian theory of evolution has reduced our greatest human aspirations to the level of pragmatism and survival. Materialism has become widespread as the natural extension of the technological successes of the scientific approach and our civilization has adopted competition and progress as its resulting dynamic principles. Psychologically this is translated as the search for pleasure, security and success, all of which is summed up in the dominant aim of personal fulfilment. And as our culture is, so is our education.

But is life a random phenomenon or is it endowed with a profound meaning? Is it a chance affair or an art? Art, as K often defined it, means to put everything in its right place so that each part fits into a harmonious whole. This essential meaning of art is the same as the meaning of order, but in the realm of art order is not mechanical but reaches into the ground of creation. So to talk about art implies a quality of creative order and when we apply that word art to life we mean that the whole of it moves in harmony with itself.

We do not have to go far to see that the life of the average human being, i.e. you and I, is not endowed with this creative quality of harmonious order. Our inner and outer worlds are permeated by a sense of pervasive contradiction, division and conflict. Our relationships are in trouble and inwardly we are all at sixes and sevens. There is confusion, friction, and an abiding sense of pain, loneliness and fear, with their corresponding escapes into pleasure, gregariousness and dream havens. The general sense is that we are failing to live properly, rightly, with a quality of integrity and responsibility in action. We are fragmented human beings, inwardly and outwardly, and as we are, so is the world. In short, we are not artists of living. This commonplace evidence from our daily lives and the wider world is what gives added importance and urgency to the exploration of the art of living, an art that is central to the whole educational project of the K schools.

In the context of these schools, the art of living, as K described it, is made up of four other principal arts, namely the art of seeing, the art of listening, the art of questioning and the art of learning. Though these arts in principle address different aspects of the art of living, through them runs a common thread: they are all concerned with perception, understanding and action, i.e. with sensitivity, intelligence and compassion, flowing in unison and as an unbroken whole.

The senses are involved in all these arts —not only the outer senses but also the inner. The arts of seeing and listening mean observing with the eye and hearing with the ear as well as capturing the meaning of what is seen and heard. The art of questioning or inquiring is concerned with the factuality of this understanding and the art of learning is the sense of comprehension itself. All of them necessitate a quality of undistorted perception, which is a direct contact with the facts, with what is actually taking place. And here is where the subtlety of the art of living comes in, for in the normal operation of our senses, of our hearts and minds there is a good deal of distortion and fragmentation. The point, therefore, is whether the senses and the mind can function as a whole and without contradiction between them—whether the whole can function totally.

One might very well conceive that left to themselves the senses might function in harmony and with total sensitivity, that the body might indeed be endowed with its own quality of native intelligence. However true that might be, the actuality is that one of the senses is generally dominant and that the sensitivity is reduced further by the subjugation of the senses to the overriding conditioned structures and purposes of thought, desire and will. Our inner sensitivity or intelligence is also fragmented by the mechanical responses of thought from its conditioned background and our learning is generally reduced to a

process of memorization in which direct perception plays a very small part. This general sense of fragmentation prevents as well the wholeness of the heart, with its love and compassion. So we are only partially sensitive, partially intelligent and partially compassionate. The challenge, therefore, is to find out what is preventing this wholeness from operating.

The seeming difficulty in this inquiry is that finding out about fragmentation cannot be done by the fragments. And yet we cannot begin anywhere else, because that is what we have. The **fact** is fragmentation, disorder and conflict and we are going to learn about it. The art of living is to have no fragmentation, no fear, no conflict, no illusion; it is to function with total sensitivity and intelligence, with a full heart. So what will bridge this impossible gap between the chaotic actuality and the harmonious whole? We refuse to turn the art of living into an ideal, into the opposite of what actually is. Our daily lives are the only field in which to learn to live and we cannot learn it unless we stick with the facts.

These facts are a result. Fragmentation is a fact, something made, therefore the outcome of a process. So what is behind the fragmentation? As K examines this question, the central factor of fragmentation is the self-centred movement of thought. Self-interest, that fundamental principle of modern bourgeois democracy, is here viewed as the quintessential principle of fragmentation. The fixing of a central psychological identity centres perception, understanding and action and gives it a narrow radius. This small circle of self creates its own self-protective border in whose defence it must be constantly ready to do battle. Thus this egocentric consciousness is an obvious factor in the creation of division and conflict in the world.

Krishnamurti points out that not only is the self divisive but that thought in its very nature is fragmentary. If we take it that the self is a creation of thought, this observation concerning the intrinsic fragmentary nature of thought is still a deeper cause. Fragmentation is intrinsic to thought because it is the response of memory, which is the past. The past is necessarily limited and incomplete and its response must, as a result, be partial. This partiality and incompleteness of the response is itself a cause of disorder, as it does not meet the challenge fully. The very partial nature of the response of memory makes for a division between that response and the actuality. Thus our perception, understanding and action is incomplete and the resulting interaction is one of fragmentation.

Because our consciousness as it now exists is essentially the self-centred movement of thought, its roots are therefore in the past, a past that constitutes itself into the very heart of living, as that is what our consciousness is. But such living, by implication, is intrinsically flawed, as the past is already dead. That's why 'dying to the

past', which is to oneself as a psychological identity, is an essential part of the art of living. The art of living goes together with the art of dying. They are the two sides of the same coin.

In this context, dying takes on a new and profoundly significant meaning. Dying to the past is the same as living fully in the now. The ending of the conditioned structures of memory, such as attachment to name, form and content, is brought about by the same quality of total attention needed to meet the present fully or see anything as a whole. This total attention necessitates a quality of inner emptiness and silence of the self-centred movement of thought. Most thought is not about practical things but about ourselves, our pleasures and pains, our hopes and fears, out hurts and happiness, etc. Psychologically, we are busy with ourselves day and night. Self-interest is at the centre of our activities, whether these concern our professional occupations, our place in society or our intimate relationships. Such a dynamic movement in contradiction and conflict cannot be observed unless there is a quality of undivided attention brought to bear on it. That means an observation without the past as the observer, an observation without naming and recognition. This necessary element of pure perception not only introduces a sense of quietness into one's life but implicitly points to the nameless as the active principle of order.

This may be one of the aspects that is most commonly missed in our approach, namely the implicitly wholesome and healing quality of emptiness, of the non-manifest. Emptiness is the real meaning of capacity, not only in material terms but, more importantly, psychologically. The psyche is at its highest capacity in the fullness of space and this space, viewed negatively, is the absence of self-occupation, with its common worries and concerns and its deeper stream of continuity as time and measure.

Such an approximate description of some of the implications of the art of living is of course not the described. Words are one thing and things are another. But the challenge cannot be ignored. We are all challenged by our own lives to master this quintessential art of living and what K has done is point the way of this greatest of all arts. The challenge is to find out for ourselves whether this art really exists and the K schools exist for this purpose.

In this writer's view, the Krishnamurti schools are placed in a unique position because they are faced with this total demand for creative order stemming from the nature of living and its underlying universal stream of consciousness. This implies a change of emphasis from the outer to the inner, from thought to intelligence, from the self to relationship, from the manifest to the unmanifest, from the known to the unknown, from time to the timeless. Part of the art is to see these aspects not as opposites but as complementarities. Thus thought, knowledge and time have their right place,

as does the whole manifest world, which is our existence. But their wholeness is not in them and the point of education is to bring this wholeness about in the total freedom from fragmentation. The emphasis on perception and inner space is particularly central and it is a question whether this is given due importance in these schools. Placing the art of living as described at the centre of the educational process challenges not only the traditional way of teaching and learning but the whole cultural stream of society which, unfortunately, is informing and controlling the educational process at almost every level. But space is always possible in the midst of occupation, just as silence is always possible in the midst of noise. The important thing is to realize that occupation only finds its meaning in compassion and that noise only finds its harmony in total silence and that both necessitate the ending of self and time.

An education that can bring this about is a true education and the greatest possible service to mankind.

Science and Religion

Patrick Foster

Discussions of deep philosophical issues may seem out of place in a journal dedicated to K-12 education, but actually philosophical viewpoints (and their assumptions) inform all daily perspectives and behaviors. So unless a teacher has grappled with these underlying issues, he or she may be teaching out of unexamined conditioning. Furthermore, the teachers, administrators and staffs of the schools and foundations may turn Krishnamurti's teachings into a 'School' that will eventually become, as these things always do, just another relic of the already outdated New Age movement. The schools and foundations must re-validate K's insights *as insights* (and not as absolute pronouncements) by putting them to the test in both our personal everyday world and in our highest philosophical thought.

Because Krishnamurti didn't talk about everything, we must move beyond him in the sense of using his insights (and those of others) to examine new issues. This is not the same as adopting a 'perennial philosophy' with Krishnamurti's teachings as one path among many to a universal absolute. (Krishnamurti was against this kind of belief—his 'truth as a pathless land' does not equal 'truth as a land crisscrossed with equally valuable trails'.)

If Krishnamurti's insights are significant, they will help us see the world more clearly and help us resolve deep philosophical issues. The science-religion conflict is one philosophical issue that still needs work as it has yet to be satisfactorily resolved—and the ignoring of science and reason by religious groups is intensifying the conflict between rational secularists and religious extremists. In the science-religion interface, the traditional fact/value stance (science = fact, religion = value), the postmodern position (science and religion as alternative and equally valid worldviews), and the fundamentalist solution (science and every religion or sect other than one's own are wrong)—still reign as the paradigms, and they each have insurmountable problems. The traditionalists don't see the values embedded in science nor the conflict of values in the multiplicity of religions; the postmodernists don't understand the unique 'facticity' and consequent success of science, and the fundamentalists reject all of the wisdom of humankind outside of their own narrow conditioning.

But even more glaringly irrational is the fundamental assumption of all religions and thus of all religious solutions to the science-religion conflict: the belief in the 'sacred' and 'profane' as the fundamental divisions of reality. While science and philosophy may be too timid to actually point out the irrationality of thinking that reality being more than one fundamental ontological category, logic can indicate instantly the absurdity involved. And what is absurd is impossible (outside of reckless and meaningless language). So, a sacred/profane world is a logical impossibility that can be 'believed in' but cannot really be intellectually understood. Krishnamurti was keen on making this distinction between 'belief' (conditioned) and 'perception' (unconditioned), and it is in applying this distinction to intellectual areas Krishnamurti may not have covered that constitutes the 'moving beyond'.

But Krishnamurti did call things 'sacred' (rivers, mountains, life, deep psychological experiences), so with our new understanding of the illegitimacy of sacred/profane distinctions what do we make of his words? In most traditional religions, the sacred is related to God, gods, or some absolute (like Nirvana). I don't know why Krishnamurti called rivers and mountains sacred, and if we put all his references to sacred things together, we might see some patterns. But on the face

of it, why would rivers, for example, be sacred? Aside from historical associations in specific traditions (like Siva and the Ganges), rivers are fundamental features of many ecosystems. So fundamental that bioregionalists (social ecologists) divide the habitable earth into its various riverine watersheds. Rivers and their capillaries, on the surface and underground, support the biosphere—they are a necessary part of life on this planet. We could thus consider 'fundamental' and 'necessary' as sacred.

Modern science has of course described the fundamental and necessary aspects of life on earth. Perhaps its most sophisticated picture is that of the ecological fabric of all material systems. All things interact with other things, and many of these interactions are necessary for maintaining the living and non-living orders. And these orders are complex, hierarchical, directional, sequential, and regular: in a word, lawful.

Natural laws and the materials they guide are the *structure* of our reality. Maybe this should be considered sacred. There are laws of chemistry and physics, and there are laws of instinctual biology, and there are emerging laws of human consciousness. One of these emerging laws (emerging in our understanding) is the rule not to diminish life unnecessarily. That is, not to destroy the material infrastructure of life (overuse resources), not to poison life out of existence, not to reduce the natural diversity, not to interfere with other species outside of procuring our basic needs. And we obey this rule because we don't know much about this vast web of life, and we should tread lightly where we are ignorant. And we obey it because we are part of this web of life—it is our larger self. And we obey it because it is the reasonable attitude to take, given we are one of many species (and each of us is one of our own vast species) all vying for survival on a resource-limited planet.

Choice, reason, respect, identity are not descriptions of instinct. Humans are only part instinctual animals; the other part is language-facilitated decision-makers. And reason—created over millennia, based on what works within the constraints of reality—is the system we have developed as a species to carry out a post-instinctual path that facilitates our survival and happiness.

Without instincts to keep us in our evolutionary niche as contributing players in the larger environment, we must use reason to figure out what to do. So in this sense, reason could also be considered fundamental and hence sacred. *What I'm trying to do here is make a case for human values that are natural, universal, and unarguable.* For so long, philosophers have categorically denied values to science (hence the traditional view that attributes facts to science and values to religion) and so we never go to nature to find values. But modern science, especially the biological sciences, has become much more sophisticated, and now we can begin to spot right behavior embedded in the biosphere itself.

Along with the suggestion of looking precisely at 'what is' for guidance, I would also like to suggest looking at the impact of traditional religious values on the course of human history and welfare. The 'alienation' that seems to have plagued humans for all of recorded history—this inability to feel at home in nature, this unstoppable propensity for extreme violence, this almost perverse refusal to understand reality—must come from a very deep place, ubiquitous in most cultures. It must be either genetic or else part of a very widespread conditioning. Because some humans seem to escape it, I would say it comes from dominant traditions starting early on in our civilization.

To me, the sacred/profane tradition fits the parameters. It is old, worldwide, rarely questioned, underlying all overarching worldviews. The sacred/profane tradition not only separates (illogically) reality into two non-overlapping realms but also favors one realm over the other. Not only is the 'profane' world less important, less meaningful, less real, but it is also itself 'profaned.' It has been equated with evil, with everything ignoble, with entrapment and prison. Belief in these designations has allowed us to neglect, pollute, violate and abandon the natural world.

The family nexus is so strong in human biology that a tradition as alienating, violent, and absurd as the sacred/profane one is easily conditioned in each generation. It alienates and cripples us from earliest childhood, throwing us onto the desperate path to escape it, making us vulnerable to the religious solution of salvation-liberation—which itself assumes the same sacred/profane split (material existence is the cause of unhappiness, evil, and ignorance, while touching the sacred is the solution). Beware of buying a remedy from the same folks who slipped you the poison.

Within every human folly is a grain of truth. Perhaps the 'sacred' is our way of designating the important, the beautiful, the meaningful, the fundamental. We don't live in a monotone world where everything is relative. There *are* important things; there *is* a hierarchy of value; we *are* passionate about right behavior. For value to be truly meaningful, it must have some objective stature. In the past we have looked to religious traditions for that stature, but now we see that science and the natural world can provide that meaning. Without a transcendent 'sacred,' life on earth must be guided by immanent and fundamental natural forces. Religious 'absolutes' will turn out to be part of the natural order—and hence not really absolute at all but rather tangible and accessible, even if sometimes hidden—or else perish as meaningless concepts. And because this natural order is one, whole, there can be no cosmically polar antitheses like good/evil or nirvana/samsara or heaven/earth. 'What is' is a sacred that does not profane.

The traditional 'solutions' to the science-religion conflict have questionable assumptions and don't really help us deal with science or religion. Religious traditions are tearing civilization apart: fundamentalisms, because they are ignorant and violent; moderate traditions, because they are in an unnoticed complicity with fundamentalists in protecting an alienated sacred/profane worldview from critique. And their violence is both material and psychological. If truth turns out to be a pathless land, then the sacred-profane path is just as illusory as the Christian or Hindu or Buddhist ones. Humans will never be able to decide on one religion's values over another—they will fight to the finish over the most narrow and absurd of interpretations. In that there is no tangible evidence with which to decide for or against any religious value, there is no non-violent solution to the conflict of traditions.

Science, on the other hand, is helping us see the values inherent in nature, a nature we all share day in and day out. We are alienated from nature (including our own natural selves, our bodies), and so understanding nature and eventually our identity with nature will undermine our alienation, eliminate our excessive violence, and allow us to live more harmoniously with each other and with the other species that share our world. Without the sacred/profane distinction obscuring our vision, fundamental values of life will jump out from nature. A naturalistic ethic will make up for our lack of instinct, and the thinking animal may yet become the steward of the planet.

Learning in Kinship

V Rajiv

Most children experience a sharp dichotomy between home and school. Rarely does one come across a school that tries to work with parents, or actively seeks inputs from them. This article describes how a unique school in the Himalayas views its students as embedded within and therefore inseparable from not just their parents, but their extended families. Chirag School is located in the picturesque Kumaon Hills. It is an educational attempt by the Central Himalayan Rural Action Group (CHIRAG). In this article, the author intended to 'move away from specific contexts and settings.' The themes and questions raised are relevant to any school and neighbourhood.

Another day of absence. It wasn't clear to me why the child had stopped coming to the school. I knew that not every parent was convinced about the approach here, the common complaint being that children aren't learning enough reading and writing. The school since its the initial years has been largely concerned with creating a space that has warmth, and sparks an engagement intrinsic to the child. Earlier, a student had left us in the winter break. The city relatives had insisted that he stay with them, and his parent was assured about better standards in the urban school. The parent felt that the environment in a village could not provide for a growing child. If you only saw the interaction amongst children, there seemed for him little that made for creativity and knowledge. Worse still, they were left free to climb trees, steal walnuts, and make excursions into the forests. In a city, one could channel their energies through several means. How could he deny this opportunity to the child? Other than his father, the child had to leave behind his older sister. The parent could not afford for both to study in the city. During home visits, we had watched the siblings interact intimately. They read out to each other, assisted in cooking, went to fetch water from the nearby spring source and had a full-grown peach tree to climb on. This companionship was valuable to the siblings.

Often, children move in and out of school for family engagements. Sometimes older children have to accompany elders to the forest or fields. At other times, they look after their younger siblings when the elders go off to work. Frequent illness is another reason. In certain homes, mothers

are left alone to look after the children and the fields, while men seek out opportunities for income. With such everyday changes, the idea of school seems rather unnatural because one extricates children from their life experiences where they actually learn to take up responsibilities from a young age. The processes in a school as compared to the processes in life require greater effort. To begin with, one needs to set aside a separate time to carry out school's activity. A child derives more meaning from the tending of livestock or helping out parents in the fruit packaging. The school *dictates* rules and manners for learning, whereas the outside world supplies motivation, enterprise and leadership.

The drive behind sending children to school is to provide a point of entry into the world. The reference here is to the modern world as one views it on television. It is believed that 'good' education cannot go along with a farmer's labour, which is ridden with uncertainties. And yet, there are few options that education in the school caters to. A rising number of fast track graduates seek out government jobs for prosperity and stability. Those who cannot endure this exercise fall back to the joys of family life, which is still nourishing and reassuring. If one is ever lost in the glamour of the new world, one could always trace back to life at home. There is still the worthwhile forest and large landholdings, which could be sold at a sumptuous price.

What is rare and less tumultuous is the spirit of neighbourhood. There is an immediate sensing of each other's pain or suffering. It is the kind of kinship a child feels towards a calf or baby animals. One cannot easily comprehend what enables this sort of bonding. Is it that life here has less complex tasks, giving space for an enlarged vision? There is a bus service hereabouts that brings joy to the residents. It takes the same route each day to the nearest town and returns by evening. It stops wherever stopped. It is engaged for weddings and provides a free courier service to deliver medicines or gifts. As it approaches, it brings forth such a mix of reactions in people that one begins to sense that it is much more than a transporting machine. It mingles so effortlessly with life that it reminds you of people who comforted you in difficult times.

The web

It is morning. Several young children walk up to the schools with their older siblings. Along the hilly slopes, finding the way through a criss-cross of paths, they go past forests, springs and fields. Here, they find their mothers and other

relations who left home in the early hours to collect fodder or to attend to their farm duties. They greet each other heartily and move on. The younger children are left in the custody of a caretaker who engages them with songs, stories, alphabet and a few lessons in counting. For the child, there is a great deal happening around home: quiet play with grandparents, watching animals graze, observing how parents work or looking at the vehicles pass by. Gradually, she opens her view to the world around her. There are also larger homes where children live with extended families. Uncles and aunts are also involved in the nurturing. The child grows by observing living as a shared activity.

As children work and gain in strength, they are also drawn into some of the life practices. It is interesting to learn how some young children manage their livestock. For example, cattle are taken to a chosen pasture in the midst of a forest, where others also leave their animals to graze. At a certain moment, the animals return voluntarily to the roadside to be taken back home. Upon close observation, one cannot fail to see the different factors of growth at play in the child. The child exercises control where necessary building his skills of observation. He gains confidence by practising knowledge acquired from watching elders. He also develops character that derives strength from being able to carry out tasks that directly influence the lives of other family members. In such work, there is always the potential to evolve socially by forming new associations, and in logical ability by solving real life problems.[1]

However, there is a difference between this sort of apprenticeship, and what provides for the curiosity and growth of the child. The former calls for the learning of a set of desirable responses, the acquisition of useful habits. With the need to be recognized as active members of the community, a child seeks to develop manners early on that correspond with the traits of the community. What follows is mere enactment of different work habits wherein attitudes and tendencies get shaped along with some reserve of knowledge, similar to those of the group[2]. At this point, one wonders whether there is another approach.

As adults seek greater fulfillment, education as 'preparation' seems far too long a process—especially when conditions of life are demanding and the winds from materialist worlds are sweeping across the boundaries. Some families have succumbed to the blowing winds. Children who grew with the joint efforts of elders are left unattended. There is a mismatch of attitudes and the emerging venues of work. There is a glowing cheer for newfound things. There is a sense of loss and attendant guilt. Understandably, these are

forces that also determine a child's response in the school space. There are unanswered questions. There are pleasures of accomplishment and curiosities that relate to specific experiences. There are fears and doubts that are planted and left unattended and so on.

When life has patterns of common interest, what is the starting point—from the child himself or the aspirations of parents or should one weave the two?

Home life

During a home visit, I had to meet the child's grandmother. Initially, she appeared nervous and hesitant to speak. I was visiting her after a long period and it seemed to her as though something had gone wrong. The child had been living with his grandparents for the last three years and the parents lived with the other two children in the nearby town. Various circumstances led to the separation. The family felt responsible for the child's upbringing, just as we did. I felt that there was an opening here, to raise concerns and to share freely, putting aside our roles as guardians. During our conversation, the child proudly presented a cucumber to me. Later, he sat down cutting it under grandma's supervision. He was carefully following our conversation while we discussed his routine at home. He knew that he had been troublesome and disruptive at school while other children carried out their work independently. Probably he thought that I was going to complain about him, but in my mind I was looking for an opportunity to include him in the conversation. At one point unable to bear the suspense any more, he broke his silence. He described school life and explained why he ran out of the class frequently. At this the grandmother grew angry but he knew how to meet her anger and held his calm. He listened and looked very carefully at the accusations made by her. The interaction had only provoked more reasoning in the child, for he was unfazed and differed openly. Wherever possible, he involved me in explaining the order of facts. What ensued was an open-ended discussion that brought the three of us together. Soon it was his playtime. And grandma guided him to choose the right clothes. Before leaving, he looked back at us with an intent smile and rushed outdoors. Soon after, I too left her with feeling a greater lightness settle in me. This was a contrast to several reactions I had harboured during my irregular conversations with him at the school. I recalled how he had interacted with a younger cousin, cajoling her in the adult's manner, revealing another aspect of himself. Here, he seemed much

more independent and thoughtful than in school. More than anything else, it was interesting to see how he matched up to his seemingly authoritarian grandma and challenged her in some points of the argument. The child seemed to relate to her concerns, and saw them as matters of fact of which he needed to be reminded. Perhaps he wanted to learn these skills at a faster pace, or differently, than the standards set by the school and its routine.

Kinship

It is the chief interest of any school that is concerned with the wholesome growth of child to involve parents and to integrate home life with the schooling experience. And yet one falls short of making this communication possible. The challenges are rather personal. Where at one level, it certainly depends on the individual's ability to articulate pedagogic principles or philosophy, there is a basic challenge to listen and engage. One often acquires mannerisms, vocabulary, attitudes, skills and other habits that are based on specific experiences and are therefore 'exclusive'. Such a language alienates. There are few and select points of contact. One pays little attention to other modes of expressions, obsessed by a common end that all must reach.

It is necessary to find appropriate contexts for sharing, where the beginning is made from an individual's or group's experience. The challenge here is to continually engage with each other. It happened in a meeting. The parents and the teachers had to share their observations of children outside of school and home—when they were playing together or involved in some sort of cooperative venture. The purpose of this discussion was to recognize different aspects of learning involved in these interactions, and the scope for social development in the child. The participants were asked to list out qualities they wished that children gained from their education.

The parents and teachers prepared the following list:

– *Should have the ability to make decisions*
– *Should be polite*
– *Should be helpful*
– *Should think positively*
– *Should be able to solve problems independently*
– *Should be cheerful and smiling*
– *Should be open minded*
– *Should have good communication skills*
– *Should have leadership*

– *Should have patience*

– *Should be a good listener*

– *Should be sensitive and caring*

– *Should have confidence to take up new challenges*

It was interesting to see how each one narrated an experience from his or her own life to highlight a desirable quality linked to a person, or described situations when certain skills or capacities become essential. They shared instances that struck a common chord. This exercise brought everyone closer. The sharing was not of the kind where one group had more information than the other.

It is certainly difficult to carry out the functioning of a school while feeling compelled to seek an approval from a larger group, especially when immediate action is required. One is also concerned that in verbalizing, the vitality behind doing new things might be lost. While there is a need for greater autonomy at school, one also needs to understand how anxieties or fears originate in the first place. When there is undue emphasis laid on what the school can achieve, it is tempting to extend its influence by directing a child's interest even outside of its premises. Such an approach narrows vision and gives a limited view of the child. Such a responsibility can be overwhelming for the school. Here, a partnership is desirable. The school needs to cast off its parenting role and engage with freshness. It is worthwhile therefore to explore the space around, which offers different contexts and a diverse set of stimuli. It is also interesting to see how the experiences at school are being utilized at home to respond to situations. One learns about their limits while they are tested in real life situations.

In these early years of school, both teachers and parents witness together the blossoming in children. Both react in the same manner as new expressions show. There is much the same jubilation when a child declares that she can read. When the two have common interests, they share a companionship. The regard for a teacher is possibly born with this sensing. It is fascinating to note that it is the child that facilitates such associations.

References

1 John Dewey, *The School and Society* (Southern Illinois University Press, 1980)

2 John Dewey, *Democracy and Education* (The Free Press, 1997) Also Krishna Kumar, *Raj Samaj Aur Shiksha* (Rajkamal Publishers) and Toni Morrison lecture (1993) <http://nobelprize.org/nobel_prizes/literature/laureates/1993/morrison-lecture.html> for insights into the use of language

Educating Romeo and his Teacher

SHASHIDHAR JAGADEESHAN

I am a 17-year-old adolescent male. I am sure this very statement gives you the heebie-jeebies! My parents and teachers are highly educated and have no qualms in sharing all the latest research on adolescents, plus their own home-grown wisdom about teenagers, with me. Let us begin with biology. They tell me that my body is going through tremendous change, mainly of the hormonal. Not only is there an increase in the concentration level of testosterone in my body, there are also irregularities in its cycling pattern. These apparently have direct and indirect effects on my body and behavior, such as the increase in the strength that I feel, how I experience some things intensely, my mood swings and my 'blooming' sexuality.

The neurobiology freaks in the adult fraternity are also very quick to tell me that not only is my body on overdrive, my brain is involved too! Apparently there are very important changes happening in my brain. There are two culprits involved in this. One is the limbic area and the other is the prefrontal/parietal cortex. The former is responsible for social and emotional responses (feeling excited and charged when I am with my peers) and the latter for cognitive control, stuff like thinking ahead and impulse control (for example, choosing to wear a helmet when I drive a two-wheeler). By my age the limbic area (part of the 'old brain' evolutionarily speaking) is more fully developed than the prefrontal/parietal cortices (part of the 'new brain'), which will continue to develop well into my adulthood. Apparently the neural connections between the two areas are not yet complete. Moreover, hormonal changes in my body seem to impact the limbic system. One way in which all this manifests is that I somehow feel completely in control of situations and cannot understand why adults are so unwilling to take risks! They always seem to worry about some consequence in the future.

Boy! I can see how this can get some of us into trouble, like the other day when two of my friends pushed off for a walk into the forest without telling anyone. They left at around 6 pm, calculating that they would be back well before dinner at 7 pm. As you can guess, they got lost and it suddenly turned very dark. Of course, they were not wimpish enough to think of carrying things like torches. The only trouble was, since there are bears around, they did get a bit scared and started shouting, and the whole campus was roused in order to rescue them. When asked if they had thought about the risks involved, they simply said they were sure they would be back soon and nothing would go wrong.

What about the sociologists and behavioral psychologists? They love quoting the following passage by Anna Freud (daughter of Sigmund Freud, that troublemaker):

> *Adolescents are excessively egoistic, regarding themselves as the centre of the universe and sole object of interest, and yet at no time in later life are they capable of so much self-sacrifice and devotion. They form the most passionate love relations, only to break them off as abruptly as they began them. On the one hand they throw themselves enthusiastically into the life of the community and, on the other, they have an overpowering longing for solitude. They oscillate between blind submission to some self-chosen leader and defiant rebellion against any and every authority. They are selfish and materially minded and at the same time full of lofty idealism. They are ascetic but will suddenly plunge into instinctual indulgence of the most primitive character. At times their behavior to other people is rough and inconsiderate, yet they themselves are extremely touchy. Their moods veer between light-hearted optimism and the blackest pessimism. Sometimes they will work with indefatigable enthusiasm and other times they are sluggish and apathetic.*

I must give her some credit! It does seem that we adolescents are like that. But perhaps there is too much of a negative slant to her description, part of what my psychology teacher tells me is a 'storm and stress' model of teenagers. It is true that the strong image adults have of us, and their use of biology to explain away our behavior, can get on our nerves. We feel compelled to somehow fulfill their worst pictures of us!

However, I do believe Erik Erikson got it right when he said that adolescence is dominated by the need to form one's identity. One of my classmates wrote an article entitled, 'It's all about me!' in our school magazine

and here is part of what she wrote:

> *Me, myself and I—this is what life is at fourteen.What people think of me, how I look, how good I am at whatever I do, what kind of music I listen to, the kind of clothes I wear, everything is I. How happy I am and sometimes how sad I am.*

I feel adults are also like us, but I agree that we are a bit more touchy about our self image, others' images of us, what others think of our images of others and so on! Of course, apart from identity formation, sex and sexuality is a major preoccupation—not just the physical aspect, but the social aspects as well. The media and the hyped-up sexual atmosphere we live in don't help us either.

Finally, there is this whole business of autonomy. In an year I will be eighteen, I will be eligible to vote, and in many cultures, to work and earn a livelihood. If I was a girl I could get married. Yet adults don't feel I am ready for many things. Sex of course is out of the question. I must confess though that the thought of entering the adult world is both exciting and scary. I will be the master of my own life, and in today's world, given my socioeconomic background, the world is literally at my feet. There are so many creative and meaningful career options I could pursue, new relationships to be formed and so many adventures to look forward to. However, sometimes when I look at the future from a different angle, and the world I will inherit, it is very scary and depressing. Our generation will face very big challenges. Every day in some corner of the earth I read about war. Global warming is no longer a prediction but seems a reality. Materially, there seems to be no end to the comforts we can have, but I see and read about so many poor people. Many people I know of seem to have mental health issues and I read somewhere that those are on the increase.

I am left with some uneasy questions. Am I ready to face such a world, have I been educated not only to earn a livelihood but also to navigate the world—the real and the emotional?

I am a 46-year-old middle-aged educator. One of my main jobs is to create a meaningful educational programme for 15- to 18-year olds. I feel educating young adults is one of the greatest challenges that educators

face. Our young friend's self portrayal (!) surely poses many challenges for us and demands a sensitive response. Most education systems I see around me seem woefully inadequate. They seem only concerned with somehow getting students ready to earn a livelihood. They ignore the biological, social and psychological changes that adolescents are going through, and end up desensitising young people. Yet these are the very young people who will create the societies of tomorrow. In not recognizing this vital area of education, perhaps we are missing a great opportunity.

You might well turn around and ask me: so what ideas do you have? I will be sharing ideas that have arisen from our attempts to educate young adults at Centre For Learning (CFL) and am confident that many of these ideas can be tried out in other settings with suitable modification.

Dialogue and ownership

The cornerstone of our education is dialogue. We feel the only way we can reach young people is by keeping all channels of communication open to earn each other's trust. Dialogue happens at many levels: there are many informal one-on-one sessions with students where personal issues are discussed. Then there are sessions devoted exclusively to talking about more fundamental issues of life and living. I will go into this at some depth later in the article. Over the last two years we have also started a discussion session with the entire senior school (students from the age of 14 to 18). Here, specific issues regarding life in a community are discussed. We encourage students to feel a sense of ownership for the school, so all aspects of the school are discussed. The attempt is really to listen to and understand each other's perspectives on matters ranging from norms of behavior, punishment and consequence to sexuality, and from these discover what it is to create a school together. These dialogues have definitely helped soften the adult-student divide.

The sense of ownership naturally extends to students taking responsibility for their own education. When they join the senior school, we ask them to do a thought experiment where they are asked to project what they feel should be the ingredients of their education, their learning goals and all the variety of things that they would like to explore in the senior school. Of course it may not be possible to fulfill all their dreams (for example, they cannot pursue underwater snorkeling unless of course your school is in the Andamans!), but the idea is that we make them partners in the process of their own education rather than mere consumers. Then they do not have the luxury of picking

and choosing what they like and dislike, but have to understand that their education will consist of many experiences, some of which they may enjoy and some which they may not. This approach also responds to the growing need for autonomy that students now demonstrate. We also respond to this need by making them responsible for some key areas of the functioning of the school, for example the sports and fitness programme, helping with younger children, helping with maintenance and the upkeep of the school, cooking meals for the whole school and so on.

Respecting (and disrespecting!) biology

At CFL we have begun to respect the biological changes that young people undergo and would like as far as possible to work with these changes rather than oppose and impose our own demands on them. Research demonstrates that teenagers need more sleep and that their circadian rhythms are different from adults. We have responded to this by not demanding that they wake at unearthly hours, but being strict about the amount of sleep that they get. It is clear that their bodies are getting stronger and they need a very demanding sports programme. So a significant part of every day (on average 11/2 hrs) is kept aside for physical activity. It has also been said that physical exercise is an excellent part of preventive mental health care. Their need for adventure and risk-taking is addressed by going on treks into the neighbouring forest, and at least one trek to the Himalayas during their senior school.

One interesting point needs to be made here. While respecting biological truths about the growing brain and body, in some instances we do not yield to these without a fight! We have also read that there is a fair degree of plasticity in the brain, and we are therefore very interested in exploring educational experiences that will challenge these young people optimally if not unrealistically. For instance, while we do not insist that 15-year-olds wake up at 5 am every morning, we do challenge them about their need for adventure and the risks to which they expose themselves, their friends and the community. Accepting that the body and brain have certain tendencies (at any age, for that matter) need not prevent us from discovering whether we can, through observation and attention, behave differently. Speaking speculatively, is it possible that neural pathways correlated with well-being are encouraged to form, while those that do not are discouraged?

Exploring interests and the discipline of learning

Cognitively, young adults are capable of higher levels of learning and abstraction. So we have a demanding and rigorous academic programme. The programme aims at exposing them to different ways of thinking and learning about the world, be it in the sciences or the humanities. It is important that care is taken not only with the syllabus and the content of their subjects, but also with how they are evaluated. A dry syllabus with pointless exams is a sure recipe to turn off anyone, let alone teenagers. The academic programme also aims to hone and train their thinking skills, their ability to ask good questions and be skeptical.

We do face a serious challenge at this stage. How do we motivate students in the absence of reward and punishment? Their inability to foresee and anticipate consequences in the distant future definitely makes this task rather difficult. There is also a gender issue here for in our experience, in general, boys find it harder than girls to be disciplined and self-motivated. However, we do not feel that this justifies the systemic and systematic use of fear or rewards as a tool for motivation because in the long run it does more damage than good.

We hope that by the end of senior school programme they have an inkling of their interests and passions. We encourage them to explore their different interests (these could range through the whole gamut of human activities) at various levels, they are exposed to talks by experts in their field and also get to meet and interact with people from a variety of backgrounds and vocations and people whose passion has led them to live extraordinary lives. The last term of their senior school is spent apprenticing in an area of their interest. However, not all children may be fortunate enough to discover such an interest. For them, as also for those who may have an inkling, it is equally important to have a sense of self-worth and confidence. This is born not out of one's talent but out of confidence in one's capacity to learn, and more importantly the discipline, to fulfill the demands that this learning makes. One idea that worked well in this regard was to get some of the senior students to work and earn for a short period during the summer holidays. The jobs they undertook ranged from being an assistant to a car mechanic to working in a mass tailoring outfit, earning princely sums of Rs 40 to 100 a day! They were suddenly encountering a totally different reality, meeting and interacting with people not normally part of their social milieu. They had to realize that there

was no question of postponing the day's work. They had to complete a given task in a given period of time, no excuses. I would not recommend this activity beyond a brief period because it has the potential to backfire too!

Education and the world

We believe education is the key to the regeneration of society. It is only a deeply compassionate human being who can respond to the tremendous challenges of modern life. What can education do to 'build' compassionate and caring people? We do not claim to have any answers to this rather urgent demand. We feel that we can begin by learning about the world around us, about ourselves and see the connection between the crisis in human consciousness and the crisis in the world today.

As a part of learning about the world we have a general studies programme. The programme has two components, environmental and social. The environmental component has two aims: to develop in students a deep intimacy with their immediate living neighborhood, and to have a critical understanding of the state of the globe today. The social component aims at bringing students in contact with issues and people not normally part of their milieu. Both these components have opened up many ideas for us as educators. But we feel we are on the right track so far: making students feel a part of the web of life, and being sensitive to the fate of a large part of humanity. Another key ingredient in helping students to learn and relate to our social and physical environment is our annual excursion. Here students and teachers travel and live simply, meet people from different walks of life and encounter a variety of cultures and habitats.

Can we explore with young adults a different kind of learning, one of which *all* humans are equally capable? It is clear that as a species we are capable of learning many things, from mathematics to music, but mastery in the various fields of learning is not evenly distributed among humans. Of course, it is enough if some members of the species learn some of the skills for humans to survive. In any case, not all of us can learn all that has been learnt and mastered by humankind as a whole. However, some have hinted at a different kind of learning, about oneself and about the whole of humanity and consciousness. This learning to me is absolutely necessary if I am to lead an intelligent life. Dialogue is a very important factor in this learning, something I mentioned earlier. We set aside time every week to discuss what can be termed fundamental questions about life. Students are encouraged to

be skeptical and not believe or accept anything that they are told, to explore the art of observing oneself, to be aware of all the movements and forces that shape our thinking and being. Quiet time and spaces are set aside so that a non-verbal exploration of this learning is possible.

I hope that in this article I have shared the various possibilities in educating young adults, and that some of the ideas are adaptable to different contexts. I also hope I have not inadvertently conveyed that at the end of our senior school programme we produce *bodhisattvas*! In fact, on a daily basis, we are confronted with the enormous challenge of our own conditioning and that of our students. We humbly realize that no matter how well thought out the educational experiences may be, they may only add to the sense of the 'experiencer' in the student. Self-interest somehow has the capacity to wipe out the best of our intentions. Not to end on a pessimistic note, I just realize that the idea of self-interest is a great topic for tomorrow's dialogue session!

Let's Play

Sharad Jain

As a sports teacher the first thing that struck me, or should I say shocked me, was that sports was not a time that everyone looked forward to. In fact, when I started out I was surprised that almost fifty percent of the students who I was to work with, did not like the class at all and their questions ranged from, "Do we all have to come?", "Why is it important for us?", "What's the big deal, it's my body!" to "This is not even my sixth subject". It would not be wrong to say that there were other students who were enthusiastic, almost fanatical about this class. They hated even a minute taken away from it. As they got off the bus they would ask,

"Can we play football today?", "Could you make teams before we come to the field?" and "We won't warm up today; if we run from the class to here is that not enough warming up?"

By communicating such contrasting emotions, the students threw me off my stride as I was not prepared for this. Their responses puzzled me, as I came from a school where being athletic and fit automatically made you 'cool', not so long ago! Exercising had been so much fun I found it hard to understand why some of the students resisted it. Faced with this challenge, I began to explore ways of making a sports class student-friendly, by involving all of them. Given this context, I would like to share my journey as a middle school sports teacher.

Barriers in our minds

People are often unaware of the close interlink between the body and mind. That is, even if an individual is physically capable of some activity or sport, he/she believes it is impossible to do and is therefore unable to do the same. This is the first and perhaps most difficult barrier I was forced to deal with while taking classes. It is amazing and yet not surprising how caught we are in the images we build, how easily and how often one hears "I can't do it", "I have never done this", "I don't like this" and "I won't do this". It requires a lot of firmness, affection and persistence on the part of the adult in order to break through. Of course, like in other fields one might fail here too. But the chances of success improve greatly when, as in other subjects, the adult begins to explore with the students.

The best way for the adult to explore with the students is to play with them. It helps children when they see the adult putting theories into practice. A 'cross pass' in football when you have gone too far to the corner while trying to score a goal would be an example of that. They also learn that it takes practice and attention to improve your game and that no skill is your slave.

There is freedom from fear when joy is shared. It is important the student feels that he/she is not being subjected to something, but that we are all in the process of exploration, together. It is an immense discovery for the child that it is important for all of us to take care of our bodies. A teacher acts as a great role model in a world where fitness is gaining a lot of fashion mileage but comparatively much slower awareness. If a teacher is fit, enthusiastic and motivated about personal fitness most students begin to take interest because of a natural sense of curiosity that they possess. To exemplify the same, I would take part in all the activities of the class and keep myself fit.

Gender bias

Gender bias is quite visible in sports classes. It is an area where the students require immense support and hand-holding by the teacher. Like most of us, students come to the class with strong opinions about

'girl sports' like skipping and throw ball, and 'boy sports' like football and cricket. Therefore, to hold a mixed class where everyone is to be pushed and exercised becomes quite a challenge. Since many boys and girls are conditioned to think in a stereotypical manner, girls seem to have become comfortable with the status of non-players and therefore are quite resistant to learning. The boys do not want the girls to play, as they feel the girls 'spoil' their game. The girls are also happy with this because it helps them avoid listening to remarks the boys make. They even accept being allotted quite obviously unimportant positions in the game. Of course, there are exceptions: some girls are very enthusiastic about playing sports.

Usually the divide grows as students move to senior classes. More and more girls drop out of sports and this makes them feel even more inferior as sportspersons. This is when common physical training can be used as an excellent tool for learning together. Often, after exercising together, girls and boys discover that in terms of physical stamina and capacity, they are not too different. Training involves some challenging and interesting cardiovascular exercises such as various kinds of running, skipping, hopping and so on. The newness of these tasks holds them and does not make it boring for them. This helps break barriers as each student irrespective of the gender becomes aware of their physical capacities and mental blocks: the scope for compartmentalization as boy and girl sports is significantly reduced.

Organised competitive sport or exercise

I found that the enthusiastic group's love for the sports class was limited to organized sports. They seemed to have little interest or were unwilling to engage with the body otherwise. This over-dependence on organized sports meant that there was never complete engagement with one's body, and the stimulus was external rather than internal. Since the focus of organized team sports is primarily to win, one is always concerned about how the another person is performing. Therefore, competitive games tend to be driven by a need to win, instead of being used as a tool for exercise. This scenario provides the perfect foundation for the uninterested students to shy away from exercising. It also enhances barriers in their minds, as they are considered to be non-performers by the other students and are put in secondary roles like defenders in football, or the last batsmen in cricket. Both groups of students seem happy with the arrangement, as the enthusiastic ones can have a good game without too much interference from the uninterested ones and the uninterested ones can get away without doing too much. But that is not the idea of a sports class—it is to ensure that each student is exposed to the right skills and training for the sports that they are interested in, and also that they learn to work on their own fitness through the

right kind of exercise. They might choose common sports activities like football and cricket or uncommon ones like cycling, hiking and long distance running. This started the search for a model that would ensure that each child is stretched.

Skills programme

It was challenging to develop a skills programme that involved all the students and stretched them to their capacities. The skills programme was to facilitate learning and practising basic skills required to play a sport, for example dribbling, passing and tackling for football. The class was divided into small groups of three to four people and they practised a certain prescribed skill with each other. They helped each other learn the skill and practice it over a period of time with some help from the teacher. The teacher at this point became a resource person and most of the class was conducted by the students themselves. This has proved quite successful as it improved the quality of the game and gave the students real game situations to practice their skills in.

A fairly intense warm-up ensures that the whole group gets enough physical exercise. This enables them to practice their skills without feeling bored. This works particularly well for sports like hockey, football, cricket, volleyball, basketball and ultimate frisbee. The role of a teacher in these situations is generally to give techniques, to practice skills and encourage everyone to try out all possible options. What generally tends to happen is that while not all students take to the sports, at least they all become familiar with some of the skills involved, and therefore do not feel lost when a game is being played.

Competition

Almost all our class reviews began like this, but always ended up becoming interesting discussions. Competition always gave us a lot to talk about. It seemed important to talk about it in a forum like the sports review class as one does not want it to become a theory or something to be only talked about in culture classes.

For most students sports and competition are one and the same thing : this is not surprising, as that is what they see all around them. There seems to be competition and animosity between the teams when we watch a sport. With all the hype, publicity and praise that aggression and competition receive from the media, and even from the players themselves, it is not surprising that to a student it seems like the most natural thing.

It is therefore all the more important for a student to become aware of these tendencies that we human beings develop. To question the very nature of competition and its place in sport seems like the most important and integral part of a sports class. It is important to understand that competition and sports are not the same thing. Competition is an entirely different game played by the mind alone. Scores, win–loss are all factors that end at the end of a game, but competition is something

that we feed on before, after and during the game. The numbers involved never help you become healthier, exercise or play better, but the pleasure of becoming a winner becomes so great that one readily surrenders to it and does not mind losing the pure joy of playing and exercise. This is where a teacher can help the student become aware of this movement.

Sports day

Many of us wanted to have a Sports Day that ensured participation from all students without feeling the pressure of scores, wins or losses. We also realized that it wasn't very easy to change the structure without upsetting the students. Although there were a few students who were excited about this new format, most of them were completely closed to it. We also discovered that not everybody from the teacher body was convinced about this change.

After many dialogues with the Class 12 students we decided to try the new model. It was decided that the whole school including all staff would be divided into sixteen vertical groups each mentored by two Class 12 students. The role of the mentors was to ensure participation from all group members and to dialogue with them on the importance of the new format. Each group met every evening during the last hour for fifteen days to talk and practice for various athletic events. By the end almost everyone had begun to enjoy the interactions through this new process.

For the Sports Day there were no points, winners or losers. There were a few individual events and many group activities like obstacle races, lemon and spoon race, hopscotch and others. At the end no one felt left out as there were enough events for each one to participate in.

One could say that this kind of Sports Day is not ideal to stretch all the students, but that it needs to happen in the sports classes. The Sports Day is for the whole school to enjoy playing together.

Conclusion

A sports class is a great forum for students to explore and express themselves, as it does not place certain external demands on them such as of exams or homework, yet deals with very sensitive issues during a child's growing years. It gives the students a chance to exercise both the growing body and the growing mind. It is often considered an extra-curricular activity, but the possibilities of connecting the learning happening here with the rest of the curricula are immense. It is here that one sees that freedom and order go hand in hand. When engaged in a physical activity completely, one can be totally free from scores, competition and all the rest of it and there is great beauty in that.

Poorna: An Alternative, Inclusive School

RENU SRINIVASAN

Several years ago my son, then in Class Seven, came home disturbed about an incident in school. His classmate Abhay (name changed), who sat next to him, could understand what was taught in class, but could not fare well in most of his tests and examinations. He also did not want to talk to others in the class. My son, being a new student in the school, had been trying to make friends with Abhay but found that he was quite wary. This puzzled my son on two grounds: why was Abhay so quiet and reserved, and why could he not put down on paper what he understood?

In time, Abhay became a good friend to my son and all of us. He often came to our house and we used to enjoy meeting up and playing together. He was very talented—good at art, music and sports—and he could talk with ease on many subjects! But it was very hard to see him cringe when he spoke of school or studies. With much sadness he shared that he really tried to study but it was just beyond him to write answers, and nobody seemed to understand him. "Why is it so important to do well in exams when I know so many things others don't? People just do not understand my difficulty and call me dull, lazy and many other such names."

Today Abhay is a successful entrepreneur, thanks to the support of his parents and some teachers. The greatest support that Abhay got was the understanding that he was different in terms of academic pursuits. The other areas of support were: recognizing his talents and strengths and nurturing them. Once out of school he pursued his interests and dreams and today he is a successful clothes designer.

Thisv association with Abhay got me thinking, questioning, and reflecting on how we could help children who learn differently. Abhay had the condition that is commonly known as a *learning disability* (this was not common

knowledge then). Children with this condition may have no physical or intellectual problems; the difference is that they cannot process some auditory and/or visual stimuli as well as the rest of us. For example, they may read 'b' as 'd' and 'm' as 'w'. There are several kinds of learning disabilities, from language (reading, writing, comprehension) to mathematics.

When a child finds the conventional schooling system difficult to cope with, a few questions arise. Are there any alternative methods? Is it fair for the child to go through childhood feeling handicapped for no fault of his or hers?

Since then, life has given me many opportunities to gain insights into how we can help children going through similar difficulties. The course of life took me from Calcutta to Delhi, Hyderabad to Bangalore and I taught at leading schools in these cities. It was heartening to note that many teachers had started asking these questions, recognising that there are children who process information and data differently, and feeling that it is our responsibility to reach out to these children. Over the years I learnt about alternative education, inclusive education, integrated education and learning disabilities.

The most important learning for me has been that it is possible to help each child learn the way s/he enjoys; of course the setting for the learning has to be different from the one Abhay and my son went to. This I discovered when I got an opportunity to meet with Indira Vijaysimha, one of the trustees of Poorna Trust and presently the Director of Poorna, an alternative, inclusive school in Bangalore. Over successive meetings with her, I decided to join Poorna. Working with Indira and my other colleagues, children and parents in Poorna, I feel happy that I am associated with a school that includes, in its fold, children who learn differently.

Inclusion in Poorna

Poorna is an inclusive school: 15% of the children have special learning needs and they study along with the remaining 85% children whose processing abilities are as those of the majority of the people. It started in 1993 as a home school to teach 6 children, by parents who felt that their children learnt differently and who wished to offer a different learning experience for their children. As the school grew, so did Poorna's vision:

- To evolve a system of education where children can explore and begin to understand the world around them.
- To enable children to develop emotional well-being, academic skills, and an awareness of contemporary development issues.

- To create sensitive and caring human beings who can add value to society.

Poorna is inclusive in more ways than one. In addition to enrolling children with special learning needs, we have children from various socio-economic backgrounds (some first-generation learners and some whose education we sponsor), and the children and teachers follow various faiths.

Over the years we have learnt that each individual learns differently and we build on each student's strengths. In addition to academics, students learn to respect each other despite their differences, especially those due to challenges such as learning disability or autism.

Learning through equal participation

Biologically adults produce children.
Spiritually children produce adults.
Most of us do not grow up until we have helped children to do so.
Thus do the generations form a braided cord.

George F Will

Learning never ends for anyone. The first learner is the teacher and we teachers at Poorna are constantly discovering ourselves. We are learning all the time. What is very different at Poorna is that **students are encouraged to give us feedback** and they are our greatest teachers! The journey is often rough; the good part is that with each experience we get stronger. To give you an example: we do not frame 'rules' and hand them down to our children. While deciding on a norm that we must follow, we dialogue with the children and their parents before making it a 'rule'. Children discuss and decide on the consequences of digression from norms agreed upon. In cases where there are digressions we come together to take the next course of action rather than 'handing down' consequences.

This is our strength. The involvement of the whole community—teachers and parents—in school helps us innovate continuously. Honest in their feedback, they offer healthy criticism which helps us 'think' all the time. There is an extended community of well-wishers who are there for us, whenever we need their help.

We believe that **each child enjoys learning at his/her pace** and that it is important to **expose them to a variety of learning experiences:** art, craft, the natural environment and social issues for example. This is true

for all children, but especially important for children with special learning needs. Children are encouraged to participate in discussions, to have a view on various social, environmental and other current issues. They learn to present their perspective and respect other perspectives. Children go to various communities (tribal schools, agricultural farms, fine arts centres) and stay there for a week or longer. While living in these communities they get hands-on learning experiences in a wide range of skills and vocations.

Each individual learns differently and there are diverse abilities among the students and teachers. We do our best to **integrate the differences and provide a multi-sensory approach to teaching**. We have learnt that in the initial years allowing children to explore goes a long way. To give an example: two years ago we had five-year-old Vishnu (name changed) join us. He had tremendous difficulty writing the alphabet while his friends were writing three- or four-letter words. We observed that Vishnu loved working with puzzles, drawing and painting. When other children were involved in writing tasks he painted or worked on puzzles. After about six months he expressed a desire to write with other children. Today he is as comfortable as the others in writing.

Our students are not grouped according to age. **Children work in mixed age groups and develop their interests.** Children across ages help each other develop skills, discover and understand concepts that we work on. When a child gets interested in a particular topic or concept, s/he goes all the way to find out more and we have animated discussions in class. The most interesting discussions happen during their walks in the neighbouring farm when children discover different kinds of plants and insects, and find connections or links with our own lives.

For all this to happen effectively our **class size is restricted** to sixteen to a class. Our student:teacher ratio is 9:1. While the students with learning disability are included in the classroom for most of the day, during the vernacular periods they go for remedial teaching. We have **special educators** in the school for providing remedial intervention for the children with auditory/visual processing difficulties.

Project work

Currently the two projects we are working on, as a community, are Our Greener Earth Campaign and Our Community Kitchen. Following our

commitment to make our earth greener, we are growing a lawn on our campus and planting 50 trees in our farm next door. Our farm has given us a sizeable part of their farm to develop. Our students, ranging from 10 years to 15 years of age, are working together to dig the land, plant trees and take care of the trees. As I write this article they have planted jackfruit, custard apple, pomegranate and *ashoka* trees; in the next few weeks they will be planting *papaya*, *kari patta* (curry leaves), lemon, drumstick, *chikoo* and more.

The Community Kitchen project (which is of a long-term nature) is where children work with the teachers and parent volunteers to cook a meal for the whole school. The meal is simple, nutritious and hot, which the adults and children enjoy.

Through these community projects we are learning to work together, understand each other better and enjoy sharing a tasty hot meal together!

General awareness

Social issues and events are followed closely by our students. The interesting observation I made when I joined Poorna is that they all have opinions on wide-ranging issues: from child labour to the effects of industrialization, from conserving natural resources to what careers they would like to opt for. It also helps that many of the parents are actively involved in research in pure and life sciences and ecology, and they bring in a variety of experiences which we benefit from.

Preparing for the future

We prepare our students to face life in all its aspects—emotional, intellectual, interpersonal—and to have a vocation, a passion for what they do. Our endeavour is to develop the ability to face challenges that are thrown at one in the course of life. The emotional well-being of every child is given utmost importance at Poorna.

All our students integrate into mainstream vocations and careers after taking recognised school-leaving certificates offered by the NIOS and IGCSE boards. These provide flexibility in that the children can stagger the examinations over two to five years, which reduces the pressure of academics for those with special needs. Our ex-students have gone on to diverse professions and careers: they have become doctors of Ayurveda or allopathy, dentists, craftspersons, designers, models and some of our present students are set to make careers in music, carpentry and other traditional careers.

Challenges we face

Like any other learning organization, we face many challenges in seeing our dreams through. These range from financial resources to time constraints to partnering with people who have similar ideas, ideals and passion. Each one of us has to be patient, persevering and give of our time. We have to **constantly unlearn, learn and relearn** according to the needs of the children and adults! There is a lot of dialogue that has to be done, both internal and external.

There are certain specific challenges we face as an inclusive school.

- Heterogeneity in the abilities/learning needs of children in a group. Our discussions and sharing are common and the written work is done at different levels—while some students work at the factual level of comprehension, there would be others at the inferential and some at the critical thinking levels of comprehension. Students work with concrete teaching materials/manipulatives wherever possible for conceptual understanding. Some children find mathematics extremely difficult; we work with them on the day-to-day aspects of math—the use of money, weights and measures and commercial math.
- We have regular discussions and talks with the children to sensitise those without special learning needs about the challenges and difficulties faced by their peers with such needs.
- Low self-esteem in some children, denial or unreal expectations of parents: Students with special needs know that they are different from the majority in academic achievements. A few of them develop other talents and enjoy a high self-esteem; sadly, some children and their parents feel quite disheartened and cannot accept that one can develop other strengths (sports, performing arts) and excel in a chosen field. In them, the desire and the accompanying pressure to perform well in academics is tremendous. Parents sometimes find it very difficult to come to terms with the fact that their child is differently abled. Often, they accept the fact intellectually but at an emotional level it is very painful and they could be in denial for many years.
- To address this we meet the parents once in two months, to share the progress and the challenges that the child is facing. We reaffirm and re-commit ourselves to do our best to help the child develop life skills to become as independent as possible.

- Special educators: Special educators are few in number and it takes a while to replace one who leaves.

Dealing with the emotional state of the learning disabled child

Dealing with any person's emotional state is quite challenging. A child with special learning needs has more challenges to face if s/he has not found an alternative way to express her/his creativity. The emotional state of the child with special learning needs gets more complex with the onset of adolescence. By now s/he has noticed being different from peers (in terms of academic ability), and the changes of adolescence are compounded with this realization. We have seen that addressing parents' emotional well-being helps the children. We work in various ways:

- **interact with the child at an informal level:** It is not just academics that we discuss. Children feel free to discuss the joys and sorrows they are going through and this sharing helps classroom interactions.
- **provide opportunities for the child to succeed:** We involve him/her in activities of interest: for example, theatre, other arts, gardening, cooking, stitching. In academics we assess them orally and reduce the conventional paper-pencil element of assessment.
- **expose the child to a variety of skills:** Success in this area helps gain self-confidence and self-esteem. We invite persons from diverse fields—artists, craftspersons, film makers, scientists, biologists, doctors, engineers, theatre persons and musicians to interact with the children and work with them on projects; we have noticed that the students make 'connections', making it possible to discover an area for self-expression.
- **dialogue with parents** and help them see that there are opportunities for their children in their chosen fields, given the passion for what they choose to do.

For me it has been a very interesting journey with the students and my colleagues, into nature, human minds and much more. Each day is a new day which brings new learning and we continue to wonder and keep our curiosity alive. Also, the fact that we are together and have grown in number and in our personal as well as our professional lives, is an assurance that we

are contributing in some way to society at large. For this we are extremely grateful to all the persons who have impacted us, directly or indirectly, to give us the energy and inspiration to move on!

Writing Textbooks for Children

Usha Aroor

Anita Roddick, founder of the Body Shop which makes personal care cosmetics, was once asked admiringly what special materials her products were made from. 'Nothing,' she said, with the cynical humour typical of her, 'nothing the Body Shop sells pretends to do anything other than it says. Moisturisers moisturise, fresheners freshen and cleansers cleanse. End of story.' Yet we do know that there was much more that went into her work—research, planning, design and process. There was the philosophy, the *conscience* of the product and Roddick's belief in it.

Writing textbooks starts with a deep belief in their worth. Many writers of textbooks have to disprove some of the notions that have grown around them, for example, that they are dull, make for mechanical rote learning, and then the one we hear most often—'A textbook can never replace a teacher!' Of course it cannot. It is not meant to. But a good one can help many processes that assist the teacher's own processes and stir interests that lie latent.

Among the many aspects of textbook-writing are **text**-presentation and **exercises**. Some features of both are discussed below.

TEXT

Tone and the author's voice

The author's voice in a text is not only what she wants to say but how. At its core, it is about explaining a concept, for example, or describing something.

Most texts are layered by their very nature. As readers we are persuaded, suggested to, and influenced in different ways. In the classroom, the teacher's voice has similar layering as it carries her attitudes and beliefs, but it works in a different way because children constantly make 'adjustments' as they listen. They can accept, reject, be enthused or can choose not to bother. But their relationship with a text, especially in the bounds of a classroom, is usually that that of being *open* to influence. Young learners are in a contract where they do not know they have choices, and as writers we need to be aware of this. The following are some illustrations of how texts can exert their influence on learners.

- (*from an English textbook*)

  Robots work for us. In the future, they will do more work for us.
  They will work on farms and in factories. They will do boring, dirty work.

An imagined future in which people are served is believed to be ideal ('…they will do more work for us'). The text also suggests that some kinds of work are boring and dirty and, by implication, that other kinds are 'clean'.

- (*from a history textbook*)

  [Name of king] plundered India and looted and sacked the temples. Rivers of blood flowed.

The choice of words (*plundered*, *looted*, *sacked*, *rivers of blood*), high in emotional content, draws us into reactions of disgust and horror. Outlook and fact have got blurred in the process.

- (*from a social studies textbook*)

  You must have your bath every day. It makes you feel clean and healthy.
  Ravi has a good bath with lots of soap and water.

The voice is prescriptive, but the deeper problem is the author's assumption that everyone has access to clean water and soap.

Tone is an associated problem. Texts can talk up or talk down to readers where they should be seen as equals. They can also 'bark out' content rather than communicate or share it. Some texts almost say, 'This is how I want to say it, it's up to you to understand.'

However, the issue of how texts 'talk' is not straightforward, partly because it is bound up with the local culture of the classroom. Children, especially at the primary level, are often viewed as receivers of education, and school systems—the curriculum, syllabus, examinations—may serve to

emphasize this. One of the problems of 'received' knowledge is that truth has an elusive identity. A lot of information, even when not substantiated, is presented as if it were conclusive and unarguable.

Writers of textbooks need to remember that children *do* understand, quite soon in their lives, that not everything is proven or established. There is nothing weak about unproven information. Where necessary, the child should be invited into the speculative, tentative nature of things—'It is often thought that…'; 'Some historians believe that…'; 'We are not certain if life exists on Mars but it seems unlikely because…'

We are familiar with what makes for **clarity** and that regulating the difficulty level is important. What makes texts unclear is not only 'difficult' words and links between parts of text. Shifting styles and the combination of formal and informal language can also confuse and frustrate. Mistakenly, some of us use these variations to bring what we think is warmth to the text. In fact, as learners, children are not different from adults, and we need to adopt and maintain an appropriately formal style. The following are some examples of shifts in style.

- What is cytoplasm? The part of the protoplasm outside the nucleus is called the cytoplasm.
- We do know quite a lot about Mohenjodaro, but we are shaky about some things.

In an effort to create interest, we may also personalise and 'mush' text, as in these examples.

- Did you know that 5,000 years ago, there were no wheels, sails or ploughs, and 7,000 years ago, no metals were used!'
- Nature is the flora and fauna of the world. Nature feels upset when we force her to do what we want.

Children are capable of understanding clear, direct statements and do not want to be patronized.

Perspective and bias

Perspective is about our view of the world, of people, our prescriptions for them and of the positions we take—consciously or without our being aware of them as such. Our views may carry biases, and they can sometimes be so strong that they become norms. Unless we watch out for them, they may translate in textbooks into discriminatory language, and may have assumptions which have not been examined.

It is now standard of course to use labels such as 'humans' or 'people' for 'Man' and 'mankind'. Gender-neutral names of occupations help children respect the purpose of such naming. 'Manager' and 'actor' are now common. Other examples are fire-fighter (fireman), police officer (policeman) and flight-attendant (air hostess). It is important for the writer to believe that such changes are not smart substitutions but are of consequence as otherwise we can have text which has a forced, artificial quality about it.

The most common problem in many books seems to be a view of the world as **human-centric**. It is as if all life and phenomena exist in relation to us and for our use, as in the examples below.

> Cows give us milk.//Snakes can be dangerous.//Every part of the coconut tree is useful for us.//Nature has given us beautiful forests filled with trees.

Using **non-discriminatory language** is about using language sensitively. Biased expressions can prevent children from seeing that men and women may be different but are equal:

- Man is a rational animal.
- The men toil in the fields for many hours in all kinds of weather. The women stay in their houses.

Similarly, language can be used to exclude or include people in a special way. In the example below, Leena's religious identity is not relevant.

- Leena, who is Muslim, travels to work with me.

Generalisations, common in history and geography, need watching. They are sometimes presented as if they were the norm. They are often inaccurate as well as show a firm disregard for reality.

- The people of Rajasthan wear colourful clothes. They love to dance and sing.
- In prehistoric times, the men hunted while the women stayed in the caves and looked after the family.
- All Christians celebrate Christmas with joy.

Inclusiveness is essential and it is important not to make assumptions about **lifestyle**, religion, culture and family groups. We need to remember that children come from diverse economic backgrounds and therefore do not live in the same kinds of houses, for example, or enjoy the same privileges, whether in school or at home. Many textbooks present the nuclear family as

if that were the norm, and by implication the approved composition of the group. Not all children have or live with parents and we need to recognise this. Lifestyle includes what people eat, household amenities, clothes and aspects such as holidays and parties. Often, privileged contexts are presented to the exclusion of others, as if they were aspirations. Books are windows of opportunity for us to develop in children an awareness of 'others'. This should influence the choice of themes for stories and, for example, contexts in mathematics problems.

Themes and contexts need to be selected in advance, especially for language-teaching and mathematics to ensure that the genders are represented equitably in both texts and pictures. Belief in this representation is important as a basis for choosing as otherwise it is token, and the outcome artificial and un-honest. How people look and dress, details of their surroundings and what they eat deserves attention as this is the origin of stereotypes, in turn indicators of prejudice. Styles of dress and hair, for example are markers of social status. Old people, people in villages, religious groups and ethnic groups (the Chinese, for example) tend to be presented in a particular way. In language textbooks, 'high' food tends to get featured as if it were available to, or good for, everyone.

Presenting history

'Now what I want,' says Thomas Gradgrind in *Hard Times*, 'is, Facts. Teach these boys and girls nothing but Facts. Facts alone are wanted in life. Plant nothing else and root out everything else.' What a school that must have been!

We know that facts are problematic, especially in subjects like history and social studies. The telling of history in textbooks for young children is particularly problematic because there may not be scope for bringing in points of view. Yet, we have a responsibility to address this issue. In the 'Great Men' approach,

> Knowledge consists simply in being able to memorise…lists [of victories and great works] in the fashion of 'Memory Man' or the *Mastermind* contestant. It is a *Trivial Pursuit* version of history that provides no help in understanding either the past or the present. (Chris Harman, *A People's History of the World*)

History by its very nature is an amalgam of many points of view, hearsay and recorded information. It has become difficult, as Romila Thapar reminds

us in *The Past and Prejudice*, to separate the layers of real happenings from our—possibly biased—perception of them.

However, we do need to take a position about how facts may be presented. We have seen how tentativeness can be expressed about natural phenomena. In history, expressions such as 'it was said that…', 'believed to be', 'known to be' are preferable when we talk about events about which details are uncertain or not authenticated. They reduce the possibility of a biased outlook.

- In the religious sphere, [name of king] was tolerant.
  It is said that [name of king] was tolerant of all religions.

The Australian *Style Manual* uses the term 'asymmetrical treatment' to refer to the ways in which people, groups or events are presented. In history books, for example, some ethnic groups are more commonly portrayed as negative forces than others. The answer is not to sanitise or smooth over harsh periods of history. We need to explore ways of presenting them while reminding ourselves that our task—in a textbook—is not to judge the actions of history.

- The [name of group] imposed [name of religion] through fierce conquests and through trade.
- \\The [name of group] traded with many countries of the world such as India, China, Europe, and East and West Africa, and took the message of [name of religion] to these countries.

Rephrase content which has 'judgement' words and words with an emotional tone. Our effort should be to try not to overlay an already difficult subject with words which direct our attitudes.

- ……'s **fanaticism** (lack of tolerance?)
- Agricultural land **was in terrible ruins**. (lay waste?)
- The …… started **interfering** in the decisions of the rulers who governed the country. (The …… started to take the decisions of the rulers into their hands.)

EXERCISES AND TASKS

Exercises deserve as much of our attention as text. The following questions may be a useful starting point:

- **Does the exercise (primarily) <u>test</u> or <u>teach</u>?**
  We need to be clear about this. Examining and testing loom large in many school systems. But a textbook has a responsibility to teach before it tests.

- **What processes do we want children to follow when they work on an exercise?**
  Exercises often have a one-step, 'pat' quality. They are something to be finished, and, among other influences, online examining has washed back into making keep-it-short-and-simple an admired criterion. While there is legitimate place for such formats, learning results from *engaging* with something, changing it, moving it, transforming it. It results from children having to use what they know to work out something that they do not know so well. Building in two or three steps to completing exercises shifts the emphasis from finishing to solving, and from mechanistic work to the business of making meaning.
- **What skills do we want children to use in the exercise?**
  The use of skills becomes important when we do not want children to be content with 'regurgitating' information. In history, we may want them to make connections and analyze reasons. In mathematics, we may be looking beyond computation to applying concepts. Reading, listening, speaking and writing are some of the skills used in language teaching, and there are many sub-skills such as reading for gist or between the lines. An exercise can usefully help children transition through levels of these skills so that, taken as a whole across the textbook, children have opportunities to use multiple skills and sub-skills. In examination systems limited to using memorized material, textbooks may be the only opportunity we can give children to develop these skills.

Below are exercises in English language teaching, by way of example. Formats such as multiple choice, blank-filling and matching are used commonly in systems across the world. We will look at some of these. (Most exercises have been shown in part for reasons of space.)

Blank-filling

Blank-filling is probably the most used of formats. It has its place but can result in mechanical work or guesswork. However, if we look at blank-filling as *completion* rather than filling in, other possibilities emerge.

Compare these two versions of a task:

A	**B**
Write the sentences with the correct forms of the words in brackets.	**Answer the questions with the right form of the words underlined. Copy the answers in your notebook.**
1. She (give) him the books yesterday. She *gave* him the books yesterday.	1. Did you <u>give</u> him the books? Yes, I *gave him the books*, but there was one missing.
2. I (catch) a cold last week. ……	2. Do you <u>catch</u> colds easily? No, but I _____ a cold last week and felt very ill.

Box A has single, unconnected sentences and children may write the correct sentence without thinking too much about it. Box B, on the other hand, provides contexts that have a feel of real communication because there is a question or a statement and a response. B also provides some extra language with added vocabulary (*missing, ill*) and expressions (*felt very ill*; *there was one missing*).

In B, the instruction line divides the task into two clear steps. In the first part, we use the word 'Answer'. This gives the learner a sense of being a responder or answer-er in the situation, and a feeling of being included, not doing a task for the sake of doing it.

Here is another exercise which changes blank-filling to completion, based on making choices. Its aim is to teach rather than test even though it is actually a summary/review of the text the children have just read

Complete this summary of the text on Nellie Bly. Check your answers with Text A after you have finished and make corrections if necessary. A dotted blank stands for one word and a continuous line for a group of words.

Nellie Bly, whose [1] *<u>real name</u>* was Elizabeth Cochran, first worked with the Pittsburgh International at the [2] …….. of nineteen. She later worked with the *New York World* in New York and used [3] _____ to find out what was [4] ……. to women who had no rights.

Matching

Like blank-filling, matching may have a hit-and-miss quality but we can make changes which encourage the child to focus on the *meaning* rather than on the grammatical form.

The exercise below is based on a text the children have read. Only one match in each case refers to the text, the others are 'free', a feature which consolidates learning.

Match the first part of each sentence in column A with one of the groups which has the right endings in column B. When you have finished, call out the sentences to your teacher.

A		B
1.	Earlier,	
	a.	each member receives 80 calls a month. I drink eight classes of water a day. my phone bill is Rs 400.
2.		On an average,
	b.	they have completed the building. we put up the play. Suraj enjoyed the journey.
3.		In spite of many difficulties,
	c.	people used to kill snakes. there were no buses in the village. we were not allowed to go out after dark.

The format below uses a vertical setting. It seems to make a difference that the matches are positioned *below* the first block and not alongside it.

Match these remarks and responses.

1. Would you like a cup of coffee?
2. Are you ready? It's time we were off.
3. It looks as if the train is going to be late.
4. Were you late last night?

a. That's just what we don't need.
b. No, we got there just in time.
c. Not just now, thanks.
d. Right, I'll just get my coat.

Composing

Composing answers with guidance is another way of ensuring that children have understood how a grammatical structure works, and it gives them an opportunity to fall back on remembered language. In the exercise below,

the learner has to complete (c) by looking at (a) and (b), and is guided into composing a sensible as well as grammatically correct answer.

Complete part (c) of each number in a suitable way.

1. A lot of people can't stand
   a. getting wet. b. getting up early.
   c. .....
2. On hot days most people don't like
   a. working. b. eating big meals.
   c. .....

Experienced writers of textbooks have a file of exercise types they can use and which ease the task of having to look for something each time. Formats that work for language may not work for history, and so the selection needs to be made with care, but once made, it is an invaluable resource.

Beyond the book

A textbook has to work at different levels. One of them is a value framework which addresses, for example, peace, tolerance, non-violence and compassion. Similarly, what people do, say, how they behave and interact with others in stories or biography is of great importance. Heroism and bravery are popular subjects, but are often dealt with in a one-dimensional way, bleached of the texture of real-life happenings. We need to remember that children *can* understand problems people face and can identify with them.

At all times, teaching is a moral endeavour and books are a part of this. A book is one of the many relationships of trust that children are exposed to. We live in a complex world and to understand it takes a lifetime. But some of the dispositions we need to live in it can be set in motion, for example, open-mindedness, an active concern for the environment, understanding deprivation, community thinking and regulating oneself in an always-there consumerist setting. So too, textbooks can help us learn skills such as distinguishing fact from opinion, enquiring into things and being discussion-ready. Matthew Lipman who started the Philosophy for Children movement, considers 'being consistent' and 'learning to value reasonableness' among the higher order thinking skills we should help children develop.

Transforming is of the essence. 'What,' asks Krishnamurti in *Life Ahead*, 'have we understood when we leave school? Most of us are concerned with

bringing about a little change here and there, and with that we are satisfied… [We] think only in terms of superficial change; and if you look into it you will find that superficial change is no change at all.'

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A Life Well-Lived: Education and Values

Venu N

Everyone agrees that values should be part of a good education. This is often expressed alongside a general feeling that there has been 'erosion' in values in large sectors of social life and among important groups of people. However, this agreement is less solid than it seems. If we try to push beyond the initial feelings, we encounter difficulties. There are difficulties about what values are and which ones are important. These difficulties mirror existing divisions in society, mainly political, religious and economic ones. And when we try to understand the role of values in education, matters get even messier. There is poor understanding and little agreement about ideas and methods that are useful in bringing about a 'good' education in values.

The above confusion does not stop educators from attempting to make values part of the curriculum. Government committees do prescribe 'good values'.

These are usually presented as lists of desirable traits and attitudes that students need to internalize. Popular literature and newspaper articles egg us on from the sidelines to teach values to children in schools. Families and priests often take it upon themselves to instil values, often with an iron hand.

This is not a happy state of affairs. Apart from the idiosyncratic and often authoritarian nature of the approach, its efficacy is also in doubt. I want to argue in this essay that values education is too important to be left to chance or to experts. We need to question current approaches and explore new ideas and understandings in this area. This essay does not attempt to present a theory of values, not because theoretical issues are unimportant. They are, but there are equally important practical issues. Fruitful approaches need to have liberal doses of both dimensions.

Why values?

Animals do not seem to worry about values. In fact they do not seem to worry much at all. We do worry, mostly unnecessarily. But perhaps we would do well to worry about values. Of the things that sets humans apart from other animals, our capacity for concern for others and also our awareness of our feelings and motivations seem significant. These capacities enable us to question the quality and meaning of our lives and to behave in ways that can enhance or diminish that quality for ourselves and other people. In fact we are no longer at the mercy of natural elements. It is through our social relationships and in our inner lives that we 'create a heaven out of hell or a hell out of heaven'.

Thus, human well-being, personal and collective, depends on our nature both as social beings and feeling, reflecting persons. These capacities are present in the child, rather unformed, but it takes years of relationships and understanding to enhance and enrich them. And that is where education comes in, both for the good and the dubious.

I contend that values are important ingredients of our ability to care, to reflect and to nurture, and generally behave in ways that bring out the element of sensitivity. I do not claim that they are the only ones. Let me attempt a loose definition: 'Values are composites of judgements, attitudinal states and feelings that elicit ethical and behavioural responses in personal and social settings.' Seen this way, values are part of our biological repertoire, but also very much part of our social and personal capacities. Values are also, in a broad sense, part of our ethical sensibilities and help constitute our ethical environment.

I hope I have shown that values are important enough for education to be concerned with. Now what should be the nature of that concern?

What values are not

I have tried, in the above definition, to distinguish values from belief, ideas or general principles. This is important. If values were merely correct belief, any laundry list of 'good values' would suffice.

And the educational challenge would be just to get students to accept one set of beliefs rather than some other. This has been tried. The results have not been pretty. We do not have a clear understanding of why we advocate one set of values rather than another. Students are left to choose between different sets of values and end up dealing with the conflicts that result. Some become 'mercenaries' in their value orientation; others are burdened with guilt and uncertainty.

I would like to highlight two aspects of the nature of values that are important for our discussion. The first aspect is an extension of the ideas in the last paragraph. Values are more than just belief or preference. They are part of our capacity for feeling and reflection. This implies that values cannot be taught like a subject or an intellectual or practical skill. Value orientation and sensitivity are learned, in the widest sense of the term, and are acquired in the context of relationships.

The second aspect calls attention to the way values are held. Are values a private matter or a matter of personal choice? Many think so. I would like to differ, cautiously. There are many features of values that are the result of personal reflection and questioning. And there is individual variation in the way values develop. At the same time, it is clear that values emerge in a social setting. Social attitudes and social relationships, including education, are critical to the development of values in adults and the young. We must therefore remember that values, while not ephemeral, are dynamic and interpersonal. This implies that the personal–collective dichotomy is not useful in our exploration of values and values education. I shall dwell more on this later.

Some challenges

The discussion of values education is often muddied by the apparent multiplicity of legitimate values. There simply are too many of them. Many seem to be in conflict with each other and it becomes impossible to reconcile them. We need a way of thinking about values education that will accommodate the plurality of values inevitable in a liberal democratic society. Things were perhaps simpler for our distant ancestors. Relative homogeneity of societies and their stability in time made values and their transmission less challenging. We do not enjoy that luxury.

The second challenge relates to a point I mentioned earlier. Human technological capabilities and their impact on the world are leading to rapid and potentially destructive large-scale changes in the natural environment. We are at a point where our actions can dramatically alter the living conditions not just for the present inhabitants of the world but for future generations as well. Needless to say, this issue is intimately linked to our values and ethical outlook and education needs to confront this urgently.

Values education may also be a matter of discarding existing ways of thinking and

feeling, as much as it is about discovering new ways. This is easier said than done. We seem biologically susceptible to set ways of thought and action once we adopt them. Change and novelty is enticing and fearsome at the same time. What aspect of education can help?

Education and values

The reader may, understandably, feel intimidated by the seeming complexity of issues and all that values education is called upon to perform. There is cause for optimism, though. There is much in our dispositions that supports a coherent values education. And, as I emphasized, values education is not about discovering or choosing correct values; it is more about discovering those aspects of personal and collective functioning that support well-being. I would like to present four general themes that are connected to education in fundamental ways that could help us achieve a more sophisticated understanding of values and values education.

1. The individual and the collective —a false dichotomy

The modern era is marked by the rise of individualism. We have swung, as societies, from rigid collectives that punitively enforce ideas and values, to worshippers of the cult of the individual. Values are now required to 'respect the individual'. We find no irony in saying that 'this is my personal value and I have a right to it'. This seems to bring severe relativism into the discourse of values.

I believe that this individualised relativism is misplaced. The individual and the group are seamlessly related. And one cannot exist without the other. We need a way of resolving this without trivializing either of them.

Education has a crucial role here. Educators can help the student gain an understanding of how the personal and the public are related. This could happen in many areas and subjects. This is particularly true of the social sciences, but it can happen through our understanding of the natural sciences too. It also implies that educational environments have to nurture cooperation and not competitive personal achievement.

A related exploration is connected to the notion of social justice. Most societies are unacceptably unequal in material terms and millions live in severely impoverished conditions. If we accept, as a foundational value, that every human being deserves to live with dignity and well-being, it becomes clear that we need social arrangements that support this. Personal well-being and social justice are inextricably related and one is not meaningful without the other. Education must emphasize this insight.

2. The importance of questioning and dialogue

Educational processes that encourage the skills and abilities of questioning are superior and more effective in exploring values. The reasons are not hard to discern. As I mentioned before, values are not

merely principles or beliefs. They are more deeply rooted and are related to feelings, emotions and thinking. Unquestioning acceptance of tradition and other people's ideas defeats the possibility of a more nuanced and coherent value orientation.

Dialogue, in the sense that physicist David Bohm used, is potentially a powerful tool for the educator and the student. Dialogue in Bohm's view is an active engagement between people that involves all their faculties—thinking, feelings and emotions. It is also held in an atmosphere and culture of good will. Such a process emphasizes understanding and well-being and not discovery of fixed values.

Teachers in our society are rarely used to the autonomy that promotes questioning and dialogue for themselves and their students. Schools are hierarchically organized and students look upon teachers as figures of authority, not as partners in learning. This, difficult as it may seem, has to change, if a different approach to values is to be discovered.

To recapitulate, a process of dialogue and questioning is the centrepiece of values education. Such a process blurs the apparent but false dichotomy between interests of the individual and the group and should contribute to a more vital value orientation.

3. You are not what you seem—exploring personhood

There is a paradox at the heart of human experience as a result of their biological being. We perceive and experience the world and our relationships from the perspective of embodied selves. There is an immediate non-verbal sense in which feelings, emotions and things are mine and mine alone. At the same time it is obvious that selves are not entities like tables and chairs. And personhood is a 'fiction' constructed by our nervous systems on the fly in the conduct of life and survival. This paradoxical state of affairs is at the heart of many a philosophical puzzle.

At the basic level, the sense of self is non-verbal, direct and constantly renewed. The superstructure of memory, language and cognition enriches and deepens it and constructs a large autobiographical narrative that stays with us through life. This is in spite of the fact that the body, the biological foundation of that narrative, is constantly being renewed in many ways.

The biologically based capacity for personhood and the complex social relationships around it are, simultaneously, a source of joy and travail. Humans have acquired powers over the environment that no other species can even conceive of. At the same time human relationships and societies are hopelessly in conflict—a source of great suffering and violence.

Krishnamurti maintained, uncompromisingly, that a profound understanding of oneself is the first (and the last) step in a life well-lived. For him, it is the role of education to point, simply and non-dogmatically, to the possibility

of this understanding. This ability to hold one's personhood lightly or not at all is the foundation of value and virtue. An exploration that begins thus is an inquiry, and education has to enhance the possibility of this inquiry.

4. Awareness and reflection

As I alluded to earlier, consciousness seems to divide our world radically into the private, inner world of our lived selves and a public external world of other people, events and things. Our lives are driven by our private feelings and self-interest (subtle or otherwise), intensely felt in our flesh and bones, as it were. Our capacity for relationship, empathy and altruism coexist, paradoxically, with this. This division has given rise to conflict and cooperation at many levels—personal, interpersonal and between groups, tribes and nations.

Scientists and philosophers maintain that this is an inescapable aspect of being human. We are limited, in this view, by our biology. We cannot transcend the two perspectives, the personal and the external. Our ethical capacities, our ability to discover values and to cooperate enable us, at best, to blunt the sharp edge of our violent biological dispositions. All we can do is to create the social conditions and values that promote peace and well-being.

Many seers, Krishnamurti included, on the other hand, insist that we are capable of the insight that dissolves this paradox. It is to a 'choiceless awareness' and non-personal reflection that they point to as the foundation of this transformation.

Interestingly, everyone agrees that education is at the leading edge of this exploration. Whether to alleviate the effects or to banish the divisions forever, education and the inquiry that it must engender remains a powerful beacon. Its promise is perhaps yet to be fulfilled but its possibilities remain as fresh as ever.

Conclusion

I have argued that values and an education that supports them are not a matter of instruction. If they are to contribute to well-being, they must be based on understanding and inquiry, not dogma and belief. Education, understood in its deepest sense, must contribute to creating this capacity in students and teachers. This requires us to discard old certainties and conditioning and embrace a process that places values squarely within thinking, feeling and reflection in the context of relationships. In classrooms and homes we need to nurture a capacity for inquiry that negates old dichotomies and divisions of thought. There is no procedure for this that guarantees outcomes, but the journey promises to be exciting.

Re-examining Words in Education

EDITORS

In the brief articles that follow, we re-examine and unravel the meanings of words commonly used in the field of education.

Discipline

We admire well regulated, ordered lives. My student who submits his homework first thing Monday morning, my neighbour who is on her last lap at 6 am while I stagger on to the balcony with my first cup of tea. I need to finish all my tea drinking at home because my young colleagues at school are vegans and they look on with bemused pity at their senior colleagues, their desperate needs and their lack of discipline. All gentle, mellow and accommodating.

I suddenly remember my days in school where things were not that pretty. There was the discipline of the uniform—I once missed three weeks of school because I had left my blazer with the school badge at my aunt's place, and you just could not attend school without your blazer. I remember the whole class being caned because the school could not discover who had committed a petty theft. I remember being hauled up with several others for being late to assembly even though I travelled on the school bus and somebody did not discover that the whole pick up needed ten more minutes. Such things to laugh about as adults but made monstrous in the life of a student, not because each school has its own quirks but the near-universality of fear, shame and punishment which is the face of discipline.

I discovered that the word, just the word, had a root meaning so different, as a young college student. We had a few teachers, bright, liberal and passionate about their subject, and, in what used to be a General English class for all undergraduates, one of them ensured that we heard the Greek or Latin roots. But it was academic exercise, interesting for the bookish to learn how meanings got 'corrupted' over time, and forgotten by the vast majority before the period got over.

Several years later I heard Krishnamurti use the word.Every once in a while he would remind his listeners of its root meaning from the Latin, *discere*, which means, to learn:

'I am using the word discipline in its right sense, its right meaning—which is, to learn. Discipline does not imply, in the original sense of that word, conformity, suppression, imitation, but rather a process of learning'.

So, about the time I stepped into a K school there was no running away from the fact that this word discipline had a definition and significance of enormous consequence for a teacher.

A casual glance at the word on the net lists the following meanings:

Noun: Something, such as loss, pain, or confinement, imposed for wrongdoing: castigation, chastisement, correction, penalty, punishment, reward/punish/deserve. An area of academic study that is part of a larger body of learning: branch, specialty. See *part/whole*.

Verb: To impart knowledge and skill to: coach, educate, instruct, school, teach, train, tutor. See *teach/learn*.To subject (one) to a penalty for a wrong: castigate, chastise, correct, penalize, punish. See *reward/punish/deserve.*

Why both the noun and the verb forms have such divergent meanings might be a fascinating study; regrettably it links school and teaching to correction and punishment.

We know that discipline implies the act of learning a craft or learning to enquire in a particular subject. We talk of the disciplines of mathematics, the sciences and the humanities, the discipline of a carpenter, a potter or a dancer. Here it is not the taming of an unruly mind but the honing of a capacity of the mind to explore in a rigorous and creative manner. Indeed without the rigour the creativity does not have much relevance. It becomes flabby and incapable of discovering anything significant. Discipline here is an antidote to self-indulgent subjectivity. In this usage there is a perceived alliance between discipline and the freedom to explore. Even so there is a hint of a tension between discipline and the natural movement of the mind. Discipline is something that has to be imposed from the outside or by oneself.

Krishnamurti approaches discipline in a different way. Although it has much in common with the root meaning of the word, in his understanding discipline is inherent in the movement of learning. So a mind in a state of

learning is also simultaneously discovering its own discipline. The key word is discovering—the action in the present and continuous.

And for all of us engaged in the education of children he would say no matter how unavoidable it may seem to a teacher—who means to be very kind and nice—to force and compel (for the child's own good) the seeds of conformity are being sown which in turn leads to imitation and fear.

> Discipline is an easy way to control a child, but it does not help him to understand the problems involved in living… (when) you try to understand him, you try to discover what are the motives, the urges, the drives, that are behind him or her and by understanding him, you bring about the right environment…all that is implied when you love a child; but we don't love children…
>
> J Krishnamurti

Viju Jaithirtha

Work and Leisure

Is it possible for a school to run in a leisurely way? (Interesting that the language forces the school to run, not walk!). Students have a great deal of work on their plates—classes, studying and homework. Teachers have to prepare and take those classes, set and correct homework, and in most schools set and correct tests as well. If we think then, as Aristotle apparently said, that 'the end of labor is to gain leisure', and if we define leisure as the time left over from all this work, it will seem woefully little. It will not be at all surprising if we feel dissatisfied with our lot, and in a few short steps, resentful of the work itself. This can and frequently does happen to students and teachers alike.

We are all used to dividing our days into the nice bits and the not-so-nice bits. Even in a school such as ours, where learning is almost always fun, the children still say, when a class is cancelled: 'so then can we be free?!' Telling them that they are anyway free in the deepest sense of the word is a bit of irony lost on them. The truth is, I love it too when for some reason a class is cancelled and I'm free. But I wonder if it is meaningful and healthy to make such a division; I suspect it takes away from well-being. Both for myself and

my students, it is worth examining the 'versus' in work versus leisure. When a dichotomy seems false, what is an intelligent way to resolve it?

Perhaps one could examine one's state of mind when at work and when at leisure. Often, there is no difference—it is the same agitated brain, or the same relaxed, or excited, or absorbed brain, that applies itself to work or wanders through a period of leisure. At these times, it seems to matter very little whether you call what you are doing work or leisure. Yet the very fact that we distinguish the two, approaching one with resistance and the other with pleasure, hints at a difference. There could be two reasons why work is often approached with some amount of resistance. One is that there is a sense of a demand, an expectation out of one's work. Effort is required to fulfill this. And the second is that we often see the source of this expectation as outside ourselves. The best thing about leisure is that no one, not even yourself, expects you to produce anything at the end of it.

In the school day, we can try to provide significant spaces where no demands are made on a student. An immediate challenge is whether this translates to 'doing just what you please', and clearly in any community this is inadvisable. So begins the careful delineation of allowed and disallowed leisure time activities, ending with the worst-case scenario of monitored leisure time! But even if we negotiate all these, and manage to create such precious spaces of leisure for our students, we must be careful not to fall into the trap of evaluating the 'effectiveness' of leisure time! Humans are always seeking alternative paths to the same end. We are willing to give a person a holiday, but hope that his productivity will increase as a result. So we may grant a student free time, but secretly expect that she will spend it sketching rather than chatting. Our expectations will kill our joint exploration of leisure.

However, part of giving leisure to young people is that we follow it up with dialogue. Again, what is the state of mind when external demands are removed for a time? Preoccupations and worries do not drop away on request! These can make any leisure time unbearable, so that young people may seek to quickly fill it with some entertainment or the other. And on the other hand, many students experience periods when work flows; when meeting demands is enjoyable and the outcome satisfying. Thus, through dialogue with our students we can explore the nature of leisure. Does it really lie in external conditions such as free periods, and is it really impossible to be at leisure when you are working hard?

When Krishnamurti speaks of leisure, it is as a state of mind: "A school is a place of leisure where the educator and the one to be educated are both learning. This is the central fact of the school: to learn. We do not mean by leisure having time to oneself, though that is also necessary; it does not mean taking a book and sitting under a tree, or in your bedroom, reading casually. It does not mean a placid state of mind; it certainly does not mean being idle or using time for day-dreaming. Leisure means a mind that is not constantly occupied with something, with a problem, with some enjoyment, with some sensory pleasure."

Kamala V Mukunda

Knowledge

Gaining knowledge is seen as reaching the pinnacle of achievement. Both in the materialistic world as well as in the spiritual one, the aspirant looks to knowledge of one kind or another as the highest goal. If I want to be Chairperson of a company, knowledge of how to make things, sell them and run the organization in the most efficient manner possible, is the way I would go about it. On the other hand, in the non-material realm, I would look for it in 'knowing' God or arriving at knowledge of the highest truth or of the other world etc. 'Information' is trivial and purely utilitarian, and 'wisdom' is the far-off ideal. Meanwhile, what I want is knowledge, broad, deep and updated! Saying 'I don't understand' is not half as humiliating as saying 'I don't know'. In the former, part of the burden of guilt can be shifted to the person or thing sought to be understood. In the latter it is my lack of knowledge that stands exposed. Not knowing the way to Mahabalipuram or Ladakh creates its own disturbance—"don't you know?" When we get ourselves into a mess in our private or professional life, we tell ourselves that "it is lack of knowledge that has landed me in this, and it is knowledge that is going to get me out of it." This is the sub-text of anything that we actually say. Further, knowledge in oneself is a source of strength but knowledge in others is a constant threat, hence I need to 'update' myself.

On the other hand, there is Krishnamurti pointing out that knowledge is always limited and anything that flows out of a limited entity is in turn limited. Of course, Krishnamurti was not interested in getting into what he called 'semantic' issues. However, he did emphatically say that "self-knowledge

is the basis of thought". I suggest that, for him, 'knowing about ourselves' was another way of saying 'learning about ourselves'. I am intrigued by T S Eliot's lines in 'East Coker' (*Four Quartets*):

> *There is, it seems to us, / At best, only a limited value / In the knowledge derived from experience.*

The question that immediately springs to mind is: Is there a knowledge that is not derived from experience? Perhaps this kind of knowing is what Krishnamurti calls self-knowledge and for him the only other 'valid' kind is 'technological knowledge', that which gets you from here to there, and so on. He showed us that the (psychological) knowledge that says, "I know you", "I knew you will say this", etc. is based on experience, moored in the past and thus becomes a barrier to understanding, which is always in the now.

Now it is not difficult to see that the recording process of the brain, the habits that we form and the essentially regimented nature of our lives, together create insurmountable psychological problems for ourselves and others. We are nevertheless loath to let go of this powerful, in fact 'empowering', force ('tool' is hardly an adequate word to describe it). It is precisely the overwhelming presence of knowledge all around us that makes us incapable of letting go of it. This is one beast we are frightened of but still want to keep as our pet.

If I do not end up making a problem of this, what is the way? Is it possible for me to lighten the burden of (psychological) knowledge, not by attempting to jettison it (which at any rate is a tall order) but deal with it intelligently so that it sits lightly on me? We may not be bothered by knowledge as a body of books or ideas but 'knowing' (not just recorded knowledge) as a process is common to all the 'higher animals'. Intelligence, understanding, wisdom, perception—they all point to the one faculty that intervenes in helping us to separate the wheat from the chaff. (Incidentally, this chaff has the quality of passing off as wheat, which causes most trouble in human relationships—opinions coagulating into prejudices which we assert as facts and so on.)

Most vitally for educators like us, we realize knowledge is the raw material that we need to employ in many ways, if we want to help children understand the natural world. Consider the world of astronomy and, say, biology. How do the heavens move? Are they subject to laws? What may these be? Is evolution by natural selection a plausible explanation for the rich

variety of living things that we see around us? How does it work? These are questions that teachers and students explore together. Accurate knowledge of basic facts is brought into play in order that the student may see and ponder over the connections, thus leading to understanding of natural laws. The humanities are not so straightforward. In history, we piece together records of all kinds and wonder how people of a bygone age lived. There is a great deal of speculation and issues become contentious, no doubt, but it is a challenge thrown at our vaunted claim of being 'objective'. Every subject under the sun has its own rigour and discipline and it is the role of the teacher to help the child understand the structure of any subject. The content is less important. In this process, knowledge acts as a gateway to understanding. Krishnamurti recognized that there are only the scientific spirit and the religious spirit. In our quest for an understanding of the external world, knowledge is an essential aid. The rest is silence.

P Ramesh

Creativity

'We encourage creativity in our students'. A statement such as this, made in the context of school education, is often quickly associated with offerings in the curriculum such as 'arts and crafts' (especially drawing and painting!). It also connotes opportunities for display of talent in dance, dramatics and singing at school programmes. Occasionally, it may also indicate a space within language teaching for what is known as 'creative writing' (usually taking the form of short stories and poetry).

However, the notion of creativity is in fact much wider and deeper, and we ought to re-consider its implications in and for education. We may note, to begin with, that the idea of creativity need not be restricted to specific fields of production and expression, such as the ones indicated above. One could also think of creativity being exercised in fields such as mathematics and science (for instance, in the generation of an elegant proof of a theorem, or an ingenious hypothesis that suggests a plausible explanation of some curiosity observed in nature). Perhaps one could consider as being creative an approach to problem-solving in any field, which results in novel products or expressions that meet (and at times, exceed) the standards of that field. We could thus think of a creative gardener, a creative football player, or a creative businessman,

as well as a creative mathematician or scientist. And should not school education have a hand in nurturing all of these, as much as creative writers, artists or musicians? For it is through the endeavors of creative minds that all fields of activity are advanced and human society is enriched.

This points, therefore, to a wider demand on education: that of nurturing a creative quality of mind in the young. What could be the nature of such a quality of mind? One could suggest the following: a capacity for attention and deeper engagement with a field of inquiry or action; an ability to critically re-consider, re-imagine the existing realities, or patterns of knowledge and skills within the field; an ability to come anew, afresh to the situations presented; being able to hold a creative tension between the 'known' and the 'unknown'; allowing for 'space' or 'silence' in which new patterns or expressions may originate; and the skill to bring these impulses to fruition. These then may be some essential qualities to nurture if our students are to become creative practitioners in diverse fields.

We may, however, discern a deeper demand on education in looking beyond the ideas of creativity suggested thus far. Given the heightening conflict and destruction evident in the relationships of human beings with each other and with the natural world, it is imperative that we invoke another notion, that of a creative human being. Such a person would be capable of relating with empathy and responding with flexibility to rapidly changing social and environmental situations; the creative human being would find a way of life that is socially responsible and allows for creative energies to flow into action; the person would remain in dynamic engagement with deeper layers of existence, unfolding a holistic, integrative dimension that is the essence of the religious mind. Unless such human beings are nurtured, there is every reason to project an escalating path of destruction for humanity.

Education (and upbringing) hence needs to contend with a challenge far greater than what has been perceptible thus far. In seeking to meet such a challenge, perhaps the starting point is the very intent of establishing 'creative relationships' within educational communities: between teachers, students and parents. An atmosphere of affection and support, alongside a culture of critical re-appraisal of received ideas and norms of behaviour, is the ground on which a feeling of cooperation can grow. Adults need to find ways of learning together with children, and teaching should uncover for students and teachers alike the 'living quality' of various fields of study and activity. As they grow older,

students need to be helped to find avenues for creative individual expression, and discover the means by which they may contribute to the larger good. This also implies a mutual engagement of young and old with understanding the deeply ingrained movements of self. In learning to put aside its destructive potency, we release our creative potential. Human beings, in being educated, need to come upon the 'creative silence' in which a living sense of unity and interconnectedness is a perceived reality and not just an idea to aspire to.

Alok Mathur

Exploring a New Dimension to Learning

MEREDY BENSON RICE

This article describes a new exploration at Oak Grove School, Ojai—Editors

"Academic excellence is absolutely necessary, but a school includes much more than that…" *J Krishnamurti*

One of the great challenges of providing a Krishnamurti education within the context of an independent tuition-based school (especially here in America), is balancing accountability for academic excellence with all that is entailed in what he considered to be 'much more than that'. As most people familiar with his teachings know, Krishnamurti did not leave a blueprint or methodology for teaching and this has been, over the years, both freeing and sometimes frustrating to a number of teachers working in these schools. Freeing, in that teachers have been able to go about developing curriculum and choosing teaching strategies in a fairly autonomous way; frustrating in that sometimes teachers have requested more guidelines, more advice, more clarity on what exactly and how exactly they are supposed to be ensuring that 'academic excellence' is a reality and still include 'much more than that'. Parents and students often request more clarity on this point, too.

In the 2008–2009 school year Oak Grove School faculty took on the challenge of exploring whether we could come up with a framework, one with enough fluidity not to be considered a method, but which could help current as well as incoming teachers at the school develop or choose their curriculum and classroom practices with the context of a Krishnamurti school.

Our first challenge was to find out where to begin such an effort? Well, obviously it needed to start with the teachers themselves, creating many opportunities for dialogue and discussion. So we sat down together—teachers across the grade levels in small groups—and after reviewing the intent and philosophy of the School (as written by Krishnamurti himself), we began to brainstorm answers to the question: What are the expected school-wide learning objectives? Our initial lists included

hundreds of answers! So then began the work of grouping, narrowing and getting more specific, till we eventually got down to about ten to twelve.

Our next challenge was: What do we call these objectives? We wanted language that indicated an approach rather than a method, language that inherently conjured up openness and fluidity. We wanted this framework, for lack of a better word, to be akin to something like the water cycle; the cycle itself—evaporation, condensation, precipitation—is constant but the water passing through it is forever fresh and changing. We bandied about terms like practices, objectives, goals and tossed them all out feeling that they sounded too concrete. Finally, someone said, "What about arts?" and everyone seemed to simultaneously have an "aha" moment!

In the end we developed a document called The Art of Living and Learning.

The Art of Living and Learning

Oak Grove students learn to use their minds, their bodies, and their hearts well because the overarching themes expressed in the Art of Living and Learning are embedded in the school's culture, curriculum, classroom practice, and expectations of student learning. Oak Grove School is a living, learning community and therefore these 'arts' should not be perceived as fixed but dynamic in nature and in a constant state of review.

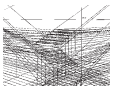
- The Art of Inquiry (observation, questioning, fact-finding, research, self-reflection)
- The Art of Communication (speaking, writing, listening)
- The Art of Academia (knowledge and application of academic standards, conventions, and disciplines in core subject areas)
- The Art of Engagement (attention, self-direction, self-motivation, self-regulation, meta-cognition or learning how one learns, examining one's own thinking)
- The Art of Aesthetics (sensitivity and appreciation of beauty in all forms of life and the arts, finding the artist within, artistic expression)
- The Art of Caring and Relationship:
  - Self (self-understanding and awareness, making healthy choices)
  - Others (self-reflection and awareness in relationship, non-violent communication, service to the common good)
  - Local and Global Communities (service and citizenship)
  - The Environment (sensitivity and mindful stewardship)

Our current challenge is for teachers to determine what these arts look like at various grade levels and/or subject areas. What does inquiry look like to a preschool student, for example, or to a middle school student studying a science, or a high school student studying American history? Then, what specific teaching strategies can be applied to a curriculum in order to ensure exposure to these arts? How do our extracurricular offerings support these arts? How does our own behavior, teaching style, relationship with the students influence the arts? And finally, how will we know if students are making progress toward the ultimate aims of the arts?

There are many more questions! But this continues to be an exciting and inspiring process for our faculty as we go deeper into this exploration.

A Mathematical Enquiry

PADMAVATHY SUNDARARAJAN



It was an unusually pleasant Wednesday afternoon in July. A visitor, an experienced mathematics teacher from overseas, was eager to observe how a discussion in mathematics could be fostered in a mixed age classroom. The class was soon after the lunch break. So, to prepare the ground for discussion, an evocative story he narrated.

"It was an afternoon just like today, and an English teacher had been sent to substitute the Math teacher who was on leave. The students were a bunch of energetic seven-year-olds. In an attempt to occupy the class with what the English teacher thought was a painstaking exercise, he asked the students to add the numbers from 1 all the way up to 100. He then settled to attend to his own work. There was a prompt tug at the lapel of his coat within ten minutes by a lad who claimed he had 'finished'. Utterly disbelieving of the

lad and yet in no position to actually check for himself the answer that the student quoted, the teacher asked the student for the one thing that he could: to justify his answer. The student wrote:

1 + 2 + 3 + …+ 98 + 99 + 100

(1 + 100) + (2 + 99) + (3 + 98) + … and so on.

He reasoned that grouping the numbers in this manner should not alter the result. That would mean adding 50 pairs of 101. He had learnt that *multiplication was repeated addition.* So, the answer was 50 x 101. That could be further simplified as (50 x 100) + (50 x 1) which equalled 5000 + 50 = 5050.

The boy (who later came to be known as the famous mathematician Carl Friedrich Gauss) had found an elegant solution to a seemingly complex problem. "What can one say of the possibilities of the young mind!""

There was a palpably appreciative silence in the class. Now the challenge began. The teacher posed the question: "If you take all the numbers from 1 to 100, what would be more—the sum of odd numbers or the sum of even numbers? And by how much?"

Students were invited to make educated guesses. The majority felt that 'both the sums would be equal because there are an equal number of odd and even numbers up to 100'. A few said that 'even would be more because 100 was the last number and it was even'. The cautious remaining were looking for a basis to proceed.

I felt that students could now calculate using paper and pencil. The only condition I suggested was that every statement of an individual should be substantiated and justified.

Now energy had been unleashed. The following is a record of the conversations that took place. The technical complexity of the statements revealed the level of understanding of the student:

Student 1: Let me first try numbers from 1 to 10.

1 + 3 + 5 + 7 + 9 = 25. 2 + 4 + 6 + 8 + 10 = 30.

Even numbers add up to more, within 10. **Therefore, up to 100 also it should be the same.**

(*Simplifying the problem and extending it inductively)*

Student 2: How can you simply say that?

S1: Why? In the other numbers also, the trend is the same. Only tens and twenties are added.

S3: But that's no answer. In Maths you need to **prove.** You can't simply show 10 examples and say "it is so".

S4: I have another logic. Look! Write the sum of odd numbers and even numbers one below the other:

1 + 3 + 5 + …… + 97 + 99

2 + 4 + 6 + ……. + 98 + 100

Each even number is 1 more than an odd number. So when you add them, the even numbers would be more.

(*A completely lateral way of approaching)*

S5: The explanation makes sense. But that still leaves the question: "how much more?"

S4: Since there are 50 even numbers, I feel the answer will be 50 more.

S3: But this is an estimation, at best an interesting one at that. That still doesn't **prove** the point**.**

S6: Since you are going on and on about **proof,** suppose you tell us what it means to **PROVE!**

S3: See, I too don't know how to prove this. But if some statement should be true, it should be true everywhere all the time. Not up to 10 or up to 100 or when you look at it one way and you look at it the other way. In fact that's *understanding for yourself* and not **proving!**

S7: Now let us try algebra. When you use 'x' and 'y' and a formula it means the statement is true for any random number and not necessarily particular numbers. That at least should be acceptable as **proof.**

(Moving from generic to specific; empirical to abstract)

Visitor: That appeals to me. Proof is the only thing that is specific to mathematics and we should not sacrifice that. In Physics you **verify** laws

with experiments. But in mathematics you prove statements starting from the beginning.

S7: Alright. Let us not go away in another direction. Hey, some seniors, tell about the formula that you learnt that day for adding numbers.

S8: Yes, I will write it on the board. In fact it is the same as that Class 2 kid mathematician's logic in the story we heard at the beginning. Only it has symbols instead of numbers.

$$1 + 2 + 3 + \ldots\ldots + n-1 + n = \frac{n\,(n+1)}{2}$$

(Moving on to formal proof)

S9: I know the rule. But I still can't apply it in this situation because you are adding odd and even numbers. There are gaps in them. The rule is for continuous numbers!

(*Acknowledging assumptions and framework within which a precept is valid)*

S3: A rule should be useful everywhere. Otherwise what's the point? Let's see if we can find the way to avoid the gaps…

S10: I've got it! I've got it! I've got it! See, we don't need to add numbers 2 times. We'll add numbers all the way up to 100. It is continuous. There are no gaps. We'll use the formula. Then we'll subtract the sum of even numbers. We'll get the sum of odd numbers. Then we can compare.

S11: Ha ha Einstein! How do you propose to add the even numbers? There are gaps. At least one of them with gaps you cannot avoid.

(*Here the class was stuck. So the teacher offered a hint*)

Teacher: You could think of $2 + 4 + 6 + \ldots\ldots + 100$ as two times $1 + 2 + 3 + \ldots\ldots 50$. Then there would be no gaps.

Class: Hey, that's cool.

Then students who knew algebra applied the formula and explained it to the class. The sum of odd numbers was calculated to be 2500 and the sum of even numbers to be 2550. So, the even numbers were more and by 50.

There was a student who had been very quiet and poring over numbers in a focussed manner. The teacher asked him to explain his attempt because

he had been following his own reasoning. He expounded: In every set of tens, there is a group of 1 + 3 + 5 + 7 + 9 and 2 + 4 + 6 + 8 + 10. So, there are 10 groups of sums of 25 and 30. So that makes the odd number group 250 and even number group 300.

Then it was only a question of evenly distributing the tens in the other numbers. From 11 to 20, 5 tens go to the odd number group (11 + 13 + etc.) and 5 tens go to the evens group. Similarly, from 21 to 30, 5 twenties go the odds and 5 twenties to the evens.

Proceeding similarly, the student had calculated the sum of odd numbers to be 2500 and even numbers to be 2550 through elegant reasoning without knowing the formula.

The class applauded this painstaking effort.

This concrete reasoning grounded all of the above discussion in a manner where each student still had a window of understanding into the solution. Suddenly the juniormost child in the class exclaimed:

S12: Hey! From 1 to 10 also, even numbers are more. From 1 to 100 also even numbers are more. So, in 1 to 1000 also even numbers will add more. In 1 to 10,000 also even numbers will add to more.

(*Not resting with one solution; extending the problem)*

S7: Oh! True, come to think of it.

S13: Hey! Look at another pattern! From 1 to 10, the even numbers add up to 5 more than odd numbers. From, 1 to 100, even numbers add up to 50 more than odd numbers. In numbers 1 to 1000, will even numbers add up to 500 more than odd numbers?

S8: Yeah, let's find out!

S3: No, I don't want to say that it will always be even numbers which add up to more than odd numbers. It depends. If you take a string of continuous numbers from the middle with, of course, an equal number of odd and even numbers, if the first is an odd number and the last an even number, then even numbers will add to more. If the first is an even number and the last is an odd number, odd numbers will add to more.

S8: Can we prove it now? Please can we prove?

It was time for that class to end. It ended then, making way for another beginning the next time!

The Art of Making Machines: A Science Classroom

K Srinivasan

Science is basically an exploration of that which is not known, or put more flamboyantly, the unknown, in the material world. It is a process by which the scientist looks for stable patterns. By means of the scientific methodology, people set out to 'control' these patterns to suit creative needs and to create new patterns. These stable patterns can also be referred to as 'machines' since they repeat their actions and cannot change their fundamental structure except through external means. (In this article the word 'machine' will be used in this broad conceptual sense.) Scientists tend to focus almost entirely on the *objectivity* of these patterns rather than the quirky, subjective emotional leanings and eccentricities that helped discover or create these machines in the first place. As a science teacher, I would like to bring up a few issues regarding the learning of science in the classroom which pertain to working with the varied emotions that the students go through.

This article is not meant to summarize or contradict the opinions of experts. It could, instead, be regarded as a sharing of a personal exploration in science education. It is aimed at both the general reader and those who have the interesting task of teaching young children science.

Lost in the numbers

To think 'in terms of numbers', as so many successful stockbrokers, bankers, physicists, chemists and others do, seems to be truly amazing. Here, I am not trying to get at the *meaning* of numbers. Rather, to understand how one *uses* numbers to classify complex processes, that is, that is, to gather data and then to make predictions based on patterns that one can identify.

At the heart of introducing numbers into science is how units are defined and used. To start with, let us look at some basic quantities like length, time and mass. These quantities cannot be defined precisely. In order to work with them, names are given, which are formally called units, such as metre, second and kilogram (whose short

forms are m, s and kg). Assuming that one knows what *one* metre is, many metres is denoted by *multiplying* some given number by the unit. For example, four metres is denoted by $4\times m = 4$ m by the shorthand notation present in algebra. Similarly 10 s or 9.8 kg denotes 10 seconds and 9.8 kilograms, respectively.

After agreeing on a procedure to label numbers, one now applies all the mathematical operations on them. For example, if one multiplies 3 m by 4 m, one has $3\ m\times 4\ m = 12\ m^2$. The numbers multiply to give 12 and the units multiply to give m^2. Now m^2, though derived, is a unique name and has to have a suitable meaning if it is to be used. In this case we know that it denotes area which is just the freedom to move in two independent ways. But other units like the square root of m ($\sqrt{m}$) or the cube of s (s^3) have no discernible meaning and are not commonly used.

Another operation is that of division. When one divides two similarly labelled numbers, say 12 m by 6 m, one gets a result that has no name, since the units cancel. It is just a number that is 2 in this case. This leads us to another property of labelled numbers, that of comparison: not how much more but how many times more (a logarithmic comparison). For small ratios it is easy to picture and work with but for larger ratios it is surprisingly difficult. Mathematically, 10^{11} is just a number and does not pose a conundrum, but as the ratio of two distances or masses, it is unfathomable since no daily experience deals with comparisons so fantastically large. We think linearly, not logarithmically.

Now we come to names derived from combining different units. Speed is a commonly used quantity and is defined as the ratio of distance covered divided by the time taken. The name of this quantity is usually given as m/s. Again, though derived, it still has a separate identity and denotes the idea of change in the form of going from one place to another. Another commonly used quantity is acceleration which is defined as the rate of change of speed with respect to time and is the basis, for example, for distinguishing sports cars from ordinary ones and in defining force. This has the name m/s^2 which is quite a mouthful because there does not seem to be an obvious way of picturing it using just the images we have of distance and time. Using the unit for mass, we have other more realistic quantities like force, pressure and energy which have the units kgm/s^2, kg/s^2m and kgm^2/s^2 which all have distinct identities. It is hard to come to terms with these quantities except through daily experience and to correlate these experiences with the units these quantities have is harder still. It isn't really obvious to children (or many adults, for that matter) how distance or time or mass can matter in the definition of energy or force. It can be bewildering to hear that the same quantity, denoted by a plethora of symbols different from those used to denote the units, can

itself have different units, for example, cm/s and mi/h in the case of speed.

Even then, we are only able to imagine what these quantities are and what they can do on a relatively small scale of magnitude. To imagine processes that are indescribably small or immeasurably large, or whose properties are obtained by dividing indescribably small quantities to give an imaginable result (which calculus does), we need to learn to abstract. The language of mathematics affords us a way to do this. Our ability to gather data, process it and make conclusions is strictly defined through the medium of named numbers which can be quite abstract.

Limitations of the deductive process

To design a working model from scratch takes time. The process usually involves building from an already existing web of ideas and products, learning from successes and failures, till the idea in the mind of the conceiver is realized. However, such a learning process is possible only by those who are 'emotionally mature'. In other words, those who are capable of bearing the emotional highs and lows brought on by dealing with the competitive forces and varied vested interests that accompany such learning. In a classroom with young children, many of the skills required to engage in scientific creativity need to be slowly introduced. It appears that they can go through the joy and pain of learning rigour and discipline only over a significantly long period of time. Even the really clever ones need sufficient time, contrary to expectations.

Among the approaches used in teaching this rigour is the deductive process. In this approach, we first list out everything we believe is useful in resolving a given problem. We would call these our variables. Then we combine these quantities, much like we do when cooking, to produce the desired solution. Its usefulness can be seen in the fantastic technological explosion happening around us in the form of gadgets. But while the deductive process is useful in factory scale production of any known solution or product, it cannot guarantee insights into as yet unsolved problems, nor can it be the basis for ingenuity. So it is important to look beyond the deductive approach if science classes are to be interesting and productive.

Emotions and their role in the classroom

Emotions of all kinds play a role in a child's development. Even negative feelings and tendencies of various kinds assume importance, though it is by no means clear how they promote growth. To help the child give expression to all of his/her emotions, without fixing onto the behavioral pattern assumed by such tendencies, appears to help foster creativity and the need to think. How can we do this in the context of science education? Some issues like inattention, interaction with others, discipline and so on will be touched upon in the following paragraphs.

Inattention in students is a common sight. To ask students to be attentive, the teacher needs to set an example in spite of his/her emotional state of mind. Put another way, a certain degree of multi-tasking is required where one keeps track of many things at once without being overwhelmed by any one predominant thing. Attention is also subjective. Why would that be so? If it were objective, like objects in the room, mathematical formulae or machines, it could always be externally imposed by following a fixed set of procedures. If one is attentive, either the student (or teacher) makes a note of something new or accepts that s/he is seeing something already seen before. But having a predetermined idea in the mind switches the mind off the external or internal object of curiosity and we have a confused state which could be called inattention. A child's lack of attention may be brought to notice with a scolding, frequent reminders, or by pointing out the presence of something risky. However, being subjective, attention has to be approached anew each time.

Sometimes, imposing a simple set of rules seems to help. Action-oriented ones such as "Don't throw things" and "Don't talk loudly" appear most helpful since they are easy to keep track of and remember. But existential rules such as "Don't be depressed" and "You must be attentive" are not of much use. They are usually impossible for children to decipher because their emphasis depends on the particular mood of the imposer! It is fair to assume that no one, especially children, can see the source of their feelings. There is also considerable uncertainty as to how feelings change. If the class environment is such that tasks can be done in an atmosphere of changing feelings, there is a certain degree of health in which attention and learning can happen. This process is seldom 'happy', but after learning happens, the maturity it brings is quite visible and is something to be cherished. It is also, I feel, not in our hands to speed it up by imposing anything for that specific purpose. It is like an immature person conceiving of his/her own maturity as an attainable goal. The contradiction is that if that can be done, s/he must already be mature.

There is a curious effect which is readily seen when something abstract, like a topic in science or math, is sought to be understood. This is the phenomenon of children (and adults) using jargon in a meaningless way and mixing up concepts. It is commonly referred to as 'talking nonsense'. When a new idea is being established by enquiry and dialogue, it possibly needs older, fixed notions to reassemble themselves to see this new pattern that is being introduced. During this 'reassembling' process, ideas are held in a jumbled state till the new pattern is seen and things become stable once more. In the 'confused' state, where no right or wrong or definite can be seen, anything the student says or does reflects that state, that is, it looks meaningless. Interrupting

this stage of growth in an individual by exposing them to strong emotions like a show of contempt or anger, or by showering unnecessary praise, seems to fix that state in place for longer than is necessary. Too much information also, introduced too quickly, produces an enduring state of confusion and can be likened to mental indigestion, if such a phrase can be used. This state of confusion can readily lead to restlessness, boredom and excess excitement. So, especially in a science classroom, patience and alertness are required since equipment can be quite easily damaged during such periods. Very rarely is it a deliberate act. Generally, it seems that everyone except the child concerned is aware of the value of costly equipment! One possible way of mitigating the damage is by repeating operating instructions and certain basic safety features, communicating calmly and firmly. Using cheap and expendable equipment can also help build a good measure of trust during such times since the teacher is less worried about its loss.

What about interaction with others, acknowledging the contribution made to one's learning from other sources, the issue of rewards and incentives, how much credit to give and what one does in the face of unreasonableness? All of these issues are reflected in the external world of adult interactions, and even in the classroom the experience is that not facing up to these issues leads to much chaos and loss of creativity. In only a very few creativity thrives in the cesspool of continuing conflict and constant seeking for rewards. In such circumstances, scientific creativity appears to lose its cooperative and inclusive outlook.

Just as in the case of attention, there can be no fixed procedure to bring order out of chaos, since the chaos itself is mostly subjective. However, that does not mean that there isn't a way out. Though it is difficult, the teacher must not convey any contradiction. For example, asking for attention or peace or reasonableness when one is irritated or scattered would qualify as a contradiction. Similarly, praise or criticism may produce lasting psychological comparisons among students rather than encourage them to modify their approaches. Since the focus of the class is really learning, it is essential that the teacher be a safe haven. Children do respond positively to a consistent approach that helps them work with their feelings.

Finally let us look at the issue of discipline. It is easiest to impose a set of rules upon a student if one is convinced that one will learn to play better, or if there are exciting possibilities and opportunities. Does understanding the rules and rigour of the scientific method, which offers great possibilities and excitement, exclude a sense of being cooperative and being a part of a group, which are so integral to learning? They might, since possessing products and skills, both material and psychological, do give a sense of not just

independence, but *independence from others*. The latter feeling is possibly the knottiest to untangle and is full of interesting emotional possibilities, chief among them being power play and influencing others to act against their natural instincts. This is undesirable since it may go against the goal of creativity, emotional reliability and adaptability to changing circumstances. So how can we talk of a disciplined approach to learning science? It is really quite a conundrum and it possibly needs an emotional leap into the unknown for each individual to discipline himself/herself.

What do we do with our products?

When we create specific products like pumps, motors, or electronic goods for specific needs, we are, in effect, materializing a set of ideas by using suitable technical knowledge. However, once a particular set of ideas has materialized into a specific product, it is not easy either to undo them (if we can, we can call it degradable) or to carry them forward to do something else. This issue has its counterpart in our attitudes too. In the classroom, once a 'successful' experiment is conducted or an insight is gained into a particular issue, it brings a sense of elation that can either be used to explore new vistas or to glorify what has happened before. The latter is the inability to be fluid enough to make our own 'known' ideas be degradable in order for exploration to take place. Perhaps this is why children are easier to teach since they don't have a history of preconceived ideas and can look at things afresh. Paradoxically, it seems that when one has studied *a lot* about a subject, that is, learnt about most of the creative ideas put forth by many people, it is possible to think afresh. So the question is, given the scientific process, how does one communicate a flavor of the subject, together with adequate technical knowledge and discipline, that brings alive the subject and makes it possible for others to do something creative? If we could shed light on this, I suppose we would never be short of exciting, purposeful things to do.

One has also observed that once a difficult task is accomplished, the mind needs a rest in order to assimilate what has been accomplished. Such a rest can take the form of taking a break or taking a backseat and letting others do the difficult tasks. Unless our classes give and promote such freedom for students, within time-limits and with watching over, we run the risk of being unable to access the strength provided by maturity born through learning. We will instead inherit a hundred disparate ideas, accomplishments and products, few of which are integrated.

What Must Social Studies Teach? An Exploration for Class Six

Roopika Jayaram

When I joined Rishi Valley School a little over an year ago, I was introduced to the teachers' resource cupboard, which had files overflowing with reading and reference material for the Social Studies curriculum for Class 6. The topics were centred around 'cities and cultures', but I was told that this was still a curriculum-in-the-making, and that I should exercise my initiative in giving shape to the course and its modes of teaching-learning. I was new to the subject. I was even newer to teaching. After a five-year long hiatus, it almost felt as if I were new to learning itself. It was the classic problem of plenty. A number of questions raced through my mind. Where should I start? What was I to do in my very first class? Even if I acquainted myself with a range of information that I was to share with them, how should I make the curricular and pedagogical choices that would most benefit my students?

Looking back, I realize that I had to start anew with the fountainhead of these questions—why do we teach Social Studies?

Since I started introspectively, I asked myself two further questions that could bring in some clarity in my understanding:

- What could the term and the subject 'social studies' mean? What must the subject *teach* the children?
- What could the children *learn* from the subject? What experiences, perspectives or skills could children gain that would contribute to their personal growth?

I reflected that social studies must literally mean the 'study of society'. 'Society' would surely refer to various groups of people and their ways of living, across time. These could be of four types – those that include 'me' and those that don't and those that exist today and those that don't. So the subject lent itself to the study of our own culture and that of another civilization's or another era's. I realized that with these two broad objectives in mind, we could, to begin with, engage in

an indepth study of one civilization from the past, and one from the present; one distant to our sub-consciousness and another, closer home.

But what civilizations or cultures or societies must these be? I had with me reference material and worksheets related to several possible areas of study: Ancient Greece, Rome, China, Banaras and London. Should we study bits of many or many bits of a few? Since these are curious ten- and eleven-year-olds whose imaginations we are aiming to fire, shouldn't we make a choice between breadth and depth of learning rather than try to aim at the delicate balance between the two? As a teacher, I felt my principal aim was to keep my children excited, and thus fuel their curiosity. For, when I look back at my school years, the only lessons I really remember are the ones that I was buoyantly enthused about. I remember most and learnt most, during my childhood, things that I discovered while groping for answers to the questions in my mind. I wanted to give my students the same—not chunks of information they didn't ask for, but little triggers to their curiosity that would lead to discoveries that they could make themselves.

With these ideas at the back of my mind, I began with a study of Ancient Greece and later we went on to Modern Banaras. These proved to be two richly colourful cultural backdrops to delve deeper into specific facets that have contributed to the making of two very distinct societies and legacies. But what should the study of these societies include and what should it exclude? What ought to be taught through this subject to children of this particular age group? What can children learn through the study of social studies—individually and collectively? The two basic questions that initially came to mind were:

- What comprises culture?
- What makes a culture unique?

Understanding the distinctiveness of cultures and human thought

In response to the first question, I came to realize that the canvas of any culture is woven with the threads of the many myths, legends and stories that have sustained the imagination of its people. Each culture has its own distinctive set of ideas and values contained in these stories.

Can we thus weave in storytelling and introduce children to the way myths and legends give us a subtle peek into the minds of a people? The first few classes had me don the storyteller's hat and animatedly narrate to them various myths about the Olympian Gods and other naughty creatures of the Greek world. Some of these stories were bizarre, others seemingly illogical, but all of them gave food for thought—as much for my amused students as for myself. Every story lent itself to heated discussions about the motives of the characters and *what they thought the characters should have done*. More significantly, the stories led to debates about how they might have been imagined by some Greek grandmother eons ago

and, equally importantly, why her children and grandchildren continued to narrate the same stories down the generations. What purposes did these stories serve in representing a world view and in binding the culture together?

The students warmed up with a round of discussions on their ideas about God. Initially, the discussions were impulse-ridden and stemmed from perspectives that gave rise to sharp questions, some born of outrage. Each had their own views on what 'God' or 'gods' ought to be like, and they were alarmed to note the diverse opinions about a question that they thought they clearly knew the answer to. A few of them took longer to accept an opposing view and respect subjectivity in opinion and thoughts. After they had had some time to chew the cud, they began to loosen up in their ideas, and became more open to asking questions. Greek gods were imperfect; they displayed all the human emotions and frailties. Even the idea of perfection in divinity could come under scrutiny. The stories of the origins of gods, beasts and man—seen through the imagination of a particular culture—raised its own set of questions about the place of each in the scheme of things. We later returned to these very questions when stories and myths along the banks of the Ganga spoke of another pantheon of Great Gods of the Indian imagination. Perhaps the students began to hold their idea of 'god' as a question, rather than as a firmly fixed reality.

We also explored another key set of questions: In what ways did the geography of a place affect its culture? How did the forms of human settlements and the manner in which they developed and organized themselves come about? By studying maps and locations, understanding the role of seas, mountains and rivers in human life, we came to understand the distinctively shaped characters of different civilizations—one that bred a rugged people who founded small, fiercely independent city-states, and another whose river bank location spawned another kind of city that built up in layers through several centuries of its history, much of this still lying embedded within its current structures and cultures.

All this gave us clues to exploring the question 'why did people come to think the way they did?' This gave rise to a basic question: how do we know what a people thought? Legacies and relics in the forms of art and architecture, scientific discoveries and innovations, rituals and traditions are great triggers to curiosity. These were seen to be some sources where we could look for answers. But unless we're handed a series of questions to look for answers to, the information about various archeological treasures can become intimidating for children. So without going into too much detail, we explored various facets that made up a city-state in Ancient Greece. The structures of buildings reveal a great deal about their aesthetic sensibilities, how people organized themselves and took

decisions that affected them collectively. The structure of the Greek home revealed the chauvinism that pervaded the social structure, even as the location of various temples in Banaras later revealed to us the perceived hierarchy among the gods (and by implication among men!). The relics of yesteryears stood testimony to the distinctly different styles of art that developed in both societies. This led to the obvious question of how archeological relics are unearthed and interpreted. Taking the role of detectives engaged in solving a mystery or attempting to put together a jigsaw puzzle, the children 'discovered' (carefully planted) artefacts, 'found' in our very own sandpit. This was a particularly engaging facet of their learning about cultures.

The place of social studies in the curriculum

Returning to my original questions, I reformulated them as: what could the children learn from the subject? What *should* the children learn from the subject? On a larger canvas, what must the children learn at this age? Are there any subtle lessons and 'takeaways' for them that might be auxiliary to the objectives of other subjects and can largely be met by this particular subject? These questions began to simplify the challenges that I faced in making curricular and pedagogical choices.

I realized that the ambit of social studies as a curricular area lies somewhere between environmental studies that they study in earlier years, whose scope includes various aspects of the world around us, and the more focussed disciplines of geography, and history into which their learning will bifurcate in later years. What would I want ten- or eleven-year-olds in Class 6 to learn that could build on the explorations of their environment in Class 5 and lay a conceptual foundation for the subjects that lay ahead in Class 7? I found that I could certainly draw on the elements of learning they had already gained from studying various natural and human facets of the world around them (in environmental studies), while anticipating the more focussed skills and scientific approach required in studying landscapes and people on the one hand (in geography), and historical events and causation across time periods (in history) on the other hand.

For instance, we learnt about various geographical features and practised map skills without calling them so. Looking at pictures and simple maps provided occasions for building familiarity with terms such as peninsula, bay, river source, mountain, glacier, and these would be used every now and then in conversation. We ended up having several versions of the meaning of, say, a peninsula, and they did not really have to learn a specific definition. After reading about a train journey across the North Indian plains (to Banaras), they learnt to plot journey routes from their own hometowns to Banaras on an outline map, using symbols and keys.

On another occasion we read through short narratives about the series of wars fought between the Persians and Greeks. These were treated like a game of strategy, with the dates of different battles placed in a time sequence, and the moves by different armies/navies studied, in order to get an understanding of how key historical events were shaped. When the Persians outnumbered the Greeks, what strategy could the Greeks have used to win the Battle of Salamis? We drew a map on the board and created symbols to represent the kind of forces on either side and brainstormed about various possible tactics. The only clue was: it was a 'simple strategy'. The children laughed when one of them suggested that the Greeks could have announced an attack and kept the Persians waiting and finally launched an attack when they got tired standing in the scorching sun. They laughed even more when they realized that this was partly what the Greeks actually did—they announced a 'night attack', and while the Persians waited in vain for the battle, they attacked only after a refreshing and sound sleep! We also discussed the topographical challenges faced by different city-states in Greece, differences between the lifestyles and philosophies of the city-states of Athens and Sparta, the concept of wartime allies and leagues, and the after-effects of war on the rebuilding of society.

While these discussions and activities laid the foundation of a thematic understanding of historical, geographical and sociological aspects, there was also scope for developing several other skills. Could the study of the subject, for instance, also assist children in making the transition from concrete, sensory-based learning, to more conceptual and research-based learning? With a plethora of information awaiting them in libraries and textbooks in the coming years, must we not ensure that this does not overwhelm them? They should learn to separate the wheat from the chaff, focus on key ideas and link concepts. We began with tasks such as reading and summarizing a paragraph or two, and then diagrammatically representing the key ideas in the form of a mind-map. The use of mind-maps was developed further till they could work in groups to sort out wide-ranging and sometimes overlapping reading material based in a common theme, and build more complex connections among ideas. Writing tasks also required them to reflect on their knowledge, figure out reasons and causes, and express their own points of view without hesitation, let alone 'fear'. They were encouraged to put down their thoughts in a 'brainstorm' first, and then begin writing at length. They wrote essays from their own point of view, and wrote letters where they took the role of a Greek God, or a character from the text, enjoying the opportunity that these assignments gave them to let their imaginations roam freely. And I enjoyed reading their thoughts and assessing what they had absorbed from the various class activities and discussions.

Apart from the above kinds of writing and taking on the familiar question-answer format, the children also made creative drawings where they could illustrate an idea, created charts for sharing their research with their classmates, as well as made models and artefacts. After the first few weeks, the children were overflowing with ideas to re-present a newly learnt facet of ancient people depending on their own preferences in art. These began as experiments to make revising and 'revisiting' classroom discussions even more nuanced. They thrilled in decorating their notebooks, began to 'think out-of-the-box' in many ways to present their work and went the extra mile in doing their work. Perhaps it is these work habits and thinking skills that they imbibed on a sub-conscious level of learning that they would carry forward to other aspects of their learning, beyond the subject and beyond the academic year.

Yet the question remained: What could be the distinctive flavour of Social Studies as a subject? How could it step in to help children grow individually and collectively, not only as students but also as people?

Understanding ourselves and human society

Could social studies classes become a platform for loosening up solidified ideas, attitudes, values and beliefs, which are embedded in us from childhood and are soon going to become a strong part of the children's sense of identity? Could we dare to ask some 'strong' questions, without the pressure or assumption of arriving at seemingly 'big' answers? I found, at various junctures, that we had some deeply personal debates. It began with their varying ideas of a 'higher power' in their lives. Later we looked at the significance of myths and their coexistence with scientific thought (as in some of the residents of Banaras). How do the two coexist—is it tolerance for opposing worldviews or just the uncertainty of our own conviction? And is there a rightful place for both, myths and scientific understanding, so that we need not mix up the two? At another point, while learning about the origin of the Olympic Games, we debated the role of competition. Does it lead to a striving for excellence? A simple laurel wreath seemed to be motivation enough for Ancient Olympic winners. We discussed about how the person who stood second would feel, considering that he may as well have come last in the race. The glory of victory made athletes give their best but could it also make them want to bend the rules and lose their integrity? Also could lack of celebration of victory make athletes complacent and not strive for excellence, leading to a dampening of potential talent? Many points of view were expressed, and we did not come to a settled position on the matter.

Discussions such as these lent themselves to some memorable writings in the children's notebooks; they have been

a source as much of my own learning about children as of answering the fundamental question of my role as a teacher of social studies. It is not so much about what they thought and expressed, as what sometimes followed. Some of them wrote to their parents about these questions, for instance, asking them about mythical stories that they had heard from them. Some of them wrote to me, confessing they were confused, but weren't sure if it was okay to say so. They were 'old enough' to know, they assumed! My ten-year-olds were beginning a new phase of discovery—through introspection, retrospection and observation. Many of these led us to long walks in the evenings, discussing other things that were confusing them about life. Small issues, but certainly not trivial.

Just as they were learning to watch their thoughts and putting their opinions forward in class, a lot of other inter-personal issues surfaced. Some of them giggled every time one particular child would answer. Some of them would give a patient hearing to a verbose classmate, regardless of the quality of his contribution to the discussion. Were there already 'images' that they had formed of each other? Did they already have undercurrents of prejudices for each other, for other adults on campus and closer home, for their neighbours in the buildings they lived in?

'Society' in its most limited sense for my children, would mean those within their own class, their dormitories, their school community, as well as family and neighbourhood at home. Can I nudge them into working on their own as well as in small groups to cooperatively accomplish personal and collective goals? Can they, in this process, reflect on their opinions about others, and about themselves? To be able to deeply appreciate that each of them is special in their own way became a pressing concern. This would foster the growth of healthy interpersonal relationships and mutual respect. As various kinds of group work was given and especially when small groups of students attempted to develop a scene from the life of a Greek town, which was to be enacted for others, it was fun watching them feel for each other, fight against the other's word and stand up and take a second look at their own. As the group chemistries developed, with each one playing their part, and the collective drama was performed successfully, children learnt about their own value in relation to others.

A specific theme I introduced was that of 'Diversity and Discrimination' (triggered by the NCERT class 6 textbook on 'Social and Political Life'). Though I was unsure of whether there could be any visible difference in the way they interact with each other after this, I decided to go ahead with an experiment—of exposing them directly to their own prejudices as well as ignorance of their dependence on others. We discussed: what would it be like to live in a world where only

potatoes were grown, only two colours existed, and everyone read the same two books while growing up? The two points I wanted to make were: everyone is unique; and everyone's uniqueness contributes to a vibrant world. But then the questions arose: is everyone appreciated, or thanked for being different? Again it was stories of real people, selected fables and a short video film that opened up the children's world to various kinds of differences, and how people might react to these differences. Whereas *individuality, inequality, differentiation* and *discrimination* might be terms that my students were unfamiliar with, they could very well catch the ideas behind them, without grappling with the terms themselves. As stories were told and discussed, their responses to these ideas became less impulsive, more thoughtful, with each class. They had heard about children their age not being able to go to school, being forced into work such as ragpicking or factory labour; but after a particular film viewing they came to see how the vicious circle of poverty affected the lives of so many children their own age. I've never seen class 6 as quiet as it was the next few minutes. Slowly a few questions trickled in: what could they do? How could they contribute to bringing a change to the lives of these other children? I smiled at the responses and suggestions this brought from their own classmates.

But this was still in reference to a world somewhat distant from their lives. Can they also consider their awareness of, and approach to, people known to them, people other than those who are friends and family: the servants at home, the workers at school? Can I structure experiences that might help them in being a little more thoughtful, a trifle more affectionate and somewhat more accommodating of others, as they make way for the course of their own lives in the world? Do these children know how many people make an impact on the smooth functioning of their daily lives without receiving a 'thank you'? How are we all inter-dependent? These were moving questions. And in many cases their own answers shocked them. Whether it was the realization of their ignorance during interviews that they took of some of the various 'significant but unseen' contributors to their student lives (the watchman, the dairy-worker, the women in the dining hall, the tailor etc.) or the assignment that asked for writing everything they knew about any of their domestic helpers—their backgrounds, their routines, their families, their dreams—the children were left either pensive or moved by their discoveries.

Other questions that we examined were: How do we make space for other people? How do we arrange ourselves and function as a society? Another kind of experiential learning that I attempted concerned the process of decision-making in human societies, which, on a broader scale, can take place within structures ranging from monarchy to democracy.

While these children may not be able to conceptualise the detailed workings of various systems of governance, they could certainly appreciate alternate modes of decision-making in contexts closer to home and link these to the others. So we discussed issues such as: how do we decide upon what drill or display should be put up by class 6 on Sports Day? How do we decide upon holiday homework for the class? These decisions could be taken by:

- The principal/co-ordinator alone (Monarchy)
- The above authority in discussion with the class teacher for class 6 (Aristocracy)
- The above authorities along with a few selected students from each section (Oligarchy)
- Discussion among all the students and concerned teachers (Democracy)

What would be the fastest way to decide? Which would mean minimum effort, or minimum dissent or maximum satisfaction among the class? After a suitably chaotic uproar in deciding the best options, the children wrote down the pros and cons of each option feverishly to clear their minds. During the debates that followed, they recognized the rationale and strengths as well as some of the loopholes of democracy.

A final theme, which moved many of the students, was a Powerpoint exposition of the beautiful course of the river Ganga. It ended with a story describing the multiple environmental problems that people have inflicted upon it, ranging from pollution to the damming of its flows, to the creeping problem of receding glaciers. The last topic brought up an awareness that even ten- and eleven-year-olds are beginning to have, that of global warming. They demanded that this be explained to them as clearly as possible. In the final class the whole class sat down and prepared posters to raise awareness and suggest action that could slow down the march of global warming.

Conclusion

As I look back to a year of teaching and learning social studies, I see that I have formed some answers to my original question: why teach social studies? At its very core, I believe that social studies aims to nurture the natural empathy and consciousness that we hold as individuals and as a people. I see it as a distinctly integrative subject that draws from various disciplinary tools and approaches to make sense of the real world, of the world close to our experience and the one distant from it. The teaching of the subject is steeped in its goal of helping children channelize and critically evaluate the flood of information and knowledge that is bound to shape their attitudes to the past, present and future. Only then will they be able to comprehend and resolve issues of significance to humanity.

The Living Past

DIBA SIDDIQI

The social sciences are ideally suited to a learning that draws on immediate and surrounding worlds. The very term Social Science embodies its own scope and approach. This field may be viewed as a systematic study of human beings and their environments. As in the natural sciences which from an early age may engage children in learning through direct observation and contact, the social sciences may engage children in learning based on encounters with the worlds about them. The social science student has the village, town or city as resources from which to make observations, gather primary information and interpret findings. An example given here is an account of the Magadi Project at the Centre For Learning (CFL), with our ten- and eleven-year-olds.

CFL is located ten kilometres east of Magadi, a medieval town in boulder-strewn scrubland. Ancient temples dot the town and its surroundings. Over the years, children have wandered the landscape, spending time in the courtyard of Kallur temple, two kilometres away, scrambling over the remains of granite fortifications on elephantine Savandurga hill, and watching the Arkavati river dwindle and swell. Many questions have arisen for them about these environs and their inhabitants.

Keen to learn more, we decided to go to tangible sources, to places that embody stories of the past, places which are still alive. We chose three temple sites as bases from which to explore. We planned to spend time at each of these sites and see what we could glean from direct contact. At the beginning of each visit, we spent a while looking, sketching and sharing our findings. As we proceeded, we were delighted with surprises. We were also faced with puzzles.

Kallur temple

Kallur temple has a small *mantapam* with four pillars, each adorned with bas relief sculptures or *ubba chitragallus*. Some children sketch the sculptures: a

lion head, a peacock, a person playing a flute, a drummer, a man leaning on a staff with a calf nibbling at his elbow, two women holding hands, four figures entwined in a geometric pattern, a snake motif.

Other children are outside, sketching and pondering over a dilapidated structure in the corner of the temple site. A sculpture detached from the entranceway seems to be a horse with an extended elephant's trunk! A gasp of excitement has us all running to a lower outer panel of the temple. Inscriptions run all along the length of the base! The rest of the term could have been spent copying the inscriptions and unearthing their meanings. We try fruitlessly to make rubbings—the granite is too bumpy. The letters seem to be of Old Kannada. One letter, a K, seems to resemble Tamil! Written evidence is there for us to interpret. Yet with our current resources, there is only so much that we may say, and that too, tentatively.

As we discuss what we might be able to say about life in Kallur as reflected by the temple, several themes arise—people engaged in worship, music, dance, carving, building with granite and herding.

In Kallur village, 50 metres away from the temple, we listen to 84 year-old Hanumanthiah's narrative.

The temple used to have copper doors.
The inscriptions mention the Hoysala king Veera Ballala.
In earlier times, village folk lived to be 110 years old.
Water boiled with neem bark was a common medicine.
Homes were made of mud.
Everybody farmed.

With bits of evidence before us, material, literal (which we could not decipher) and oral, how could we assess the likelihood of a statement? Our discussion brought up the themes of both interpretation and reliability. What does a piece of evidence suggest about life at a particular time? How likely are our conjectures? If Veera Ballala's name appears on the inscriptions, what does this mean? Among the answers that emerged were:

The temple was built during Veera Ballala's reign.
Veera Ballala made a grant to the temple.
The temple was built after Veera Ballala's time and he was referred to at a later date.

Rather than dwell on establishing **fact,** we alerted ourselves to both basing our statements on evidence as well as learning to use *may* or *might* or *possibly*!

We read a piece on inscriptions in south India. We learned that the largest source of evidence for south Indian history is from inscriptions. There are thousands of stone inscriptions and a few hundred copper plate inscriptions. The short inscriptions found in natural caves in Tamil Nadu have the names of the rock carvers. The script used is Brahmi, or the script used during the time of the Mauryan emperor Ashoka, around 200 BC. However, the language is an ancient form of Tamil. These inscriptions may be a sign of the presence of Jain and Buddhist monks in south India around 200 BC (Nilakanta Sastri, *A History of South India*).

Ranganathswamy temple

Ranganathswamy temple, closer to Magadi town, is a larger and active temple. Outside is a beautiful old step well. Within is a buzzing flurry of bells, chanting and the aroma of agarbattis. As we look for a spot to settle down and sketch we talk to a couple of pujaris who tell us about the legendary origins of the temple.

A certain rishi, Mandavya, meditated on an adjoining hill. Here he saw the divine and asked him how he would prove to others that he had seen god. He was told to build an idol of Ranganatha. He did this at a later date. Chola rulers built a temple around the idol. Magadi town derives its name from the rishi Mandavya. The place was first named Mandavya kutti, this changed to Makutti and finally to Magadi.

Frail, ninetyfive-year-old Shamanna Ajja, who guards the clothes of deities that are periodically paraded in a temple ratha, holds forth about his childhood in Tirumala, where the Ranganathaswamy temple is located.

Earlier, there were stone-cutters, farmers and potters. Roads were small and dusty. Now the government provides facilities.

He prefers his present life as he is assured food and basic comforts.

We find a spot and write accounts of what we have heard. One of our children glances upward and notices that the roof structure and designs are just the same as in Kallur! What does this mean? The hypothesis (by this time we have learned the word hypothesis: a guess about why something happens or exists) is that both temples were built around the same time in the same style, or that one was built earlier and the style lasted over time.

Our third foray led us to the Someshwara temple on the further outskirts of Magadi town. At this stage, we had paused to read about the temple and the village in South India. Rather than leave it all to conjecture, I felt it important

to also draw on the writings of scholars. Even these we could assess on the basis of our own observations. We looked at the relationship between the temple and the village. We learned about the multi-dimensional nature of the temple. It was a place of worship, music, art, dance, pilgrimage and trade. *"Schools and hospitals were often located in the temple area and it served often as the town hall where people assembled"* (Nilakanta Sastri, *A History of South India*).

> *With the widespread building of temples in the thirteenth century and later, the importance of artisans, labourers and merchants involved in temple-construction increased. Skills, goods and services necessary for the creation of temples played a role in developing towns and cities. The rise of temples and towns went together. Many towns grew around the base of hills on which temples were located* (Burton Stein, *South India: Some General Considerations* in *The Cambridge Economic History of India*, ed. Tapan Raychaudhuri and Irfan Habib).

Someshwara temple

The Someshwara temple is perched on a mound. Inside is a sprawling complex of mantapams, separated by open grassy spaces, used for farming, we are told. It is peaceful and unpeopled. Amidst the quietness, we settle down to sketch. The function of temple spaces is freely debated. Some students hold that the raised platform in the center of one mantap may have been used for weddings. Others wonder if musicians sat here.

The bas relief sculptures are of many characters. A drummer with his smiling face turned sideways, dancers, an upside down rishi in meditation, a person cloaked in a woollen blanket, perhaps a prince. We find one inscription in Kannada which reads 'labana'. What does this mean? On the floor is a long engraving of a snake. Is this a protective sign at a spot where wealth may have been buried? Outside is an exquisitely carved wooden ratha, adorned with numerous human and animal figures.

In brief conversation with a historian of South India, I learn that rectangular pillars and double-headed animals or double-bodied (single-headed) animals date to the late or post-Vijaynagar period. So this temple may be dated to around the late 1600s to the early 1700s. We cannot say for sure.

Within a locked mantapam (we climb up the outer wall and peer in) is a board that says that Mummadi Kempe Gowda made a donation to the

temple in 1712. To add to our puzzle, there are sculptures here with distinct Indo-Saracenic features—a face with a neatly trimmed beard, arches which resemble Islamic art forms. Where did these artisans come from? Who were they influenced by?

Finally, we found ourselves at Agalakote village, seven kilometres beyond Magadi. We'd had an evolving plan, deciding what to do next as our journey unfolded. While the earlier plan was to look at contemporary Magadi, we realised this was too ambitious and so we recharted and visited this village we had heard of. A significant theme in this course was engaging not only with the material and aesthetic surroundings but connecting with people. In Agalakote we had a meeting with a small group of women and children in the Muslim mohalla.

Agalakote village

Women roll beedis as they speak. They tell us of how their main aspiration is to have their children attend school in Magadi. All money saved goes towards this. Many people from this village have migrated to the city to work. Some young folks come back to look after their parents.

We learn that Agalakote was a stopping place for Tipu Sultan as he rode from Seringapatnam to Savandurga and then Bangalore. This is where people and horses would rest. Kote means fort but there are no signs of a fort nearby.

The old mosque here was built in Tipu's time. Habibul bhai, a maulvi, tells us the mosque is 400 years old. However, if it dates back to Tipu's time, it is probably around 200 years old. Granite structure. Inside, old bulbous glass lamps hang from the ceiling. They are meant to hold candles.

We walk through the inside of the mosque. We then gather in the verandah and I ask the maulvi to talk to the children about whatever he chooses. A homily ensues. He tells us about the main tenets of Islam, finally saying that the main message and purpose of namaaz or prayer is to remind yourself of how to relate considerately to people around you, your family members, your guests, like us.

By this stage of our Project, we had drawn a Timeline and marked out dates we had come across. These included dates of various rulers and kingdoms in this area—the Cholas, the Hoysalas, the Vijayanagar kings, the Yelahanka Nadu Prabhus (one of who founded Bangalore city), the Wodeyars, the British.

The students did reference work on some of these rulers. Some also looked at existing rulers in other parts of the country—the Delhi Sultanate rulers and the Mughals. We asked ourselves whether life in these rural areas would have been significantly different over these periods.

Our investigations wove in and out of experiential and text-based learning, each bringing the other alive. My own role was more of facilitator and organizer, and teacher and student became one as a picture emerged. At the end we were left with more questions than answers, eager to delve further.

Timeless Questions: A Twelfth Grade Social Studies Class

Willem Zwart

As a teacher I am always looking for a good thesis sentence, for that perfect one-sentence statement that is a concise summary of an article, a film, an argument, a teaching. So you can imagine that my heart started beating faster when, in a 1981 BBC interview with Bernard Levin, I heard Krishnamurti say: "One has to be free of all the illusions that thought has created to see something really sacred that comes about through right meditation."[1] Certainly it is not the only thesis sentence in Krishnamurti's work; indeed, at times every other sentence of his appears to be a thesis sentence. But it is a good place to start and that is exactly what I did in the *Religion, Culture and Ethics* 12th grade class at Oak Grove School this year. In this class, against the background of an investigation into many, often contradictory, theories on the meaning of life and right action, students are asked to discover, write about, and question their own outlook on life.

The goals of the year-long class are to introduce students to Krishnamurti's ideas, to survey most of the major and many of the minor religions of the world, to prepare students for their senior trip to India, to study major ethical theories and apply those theories to practical and contemporary problems, and to facilitate a movement of self-discovery throughout:

an inner exploration resulting in a deepening of awareness of conditioning and the mechanics of thought. My intention is to create a classroom environment that is as much student-driven as it is driven by me as a teacher, and where we support one another in making discoveries about ourselves and about the course material.

To begin the exploration of Krishnamurti's ideas, we watch the Bernard Levin interview, a wonderful recording. Following this, every week one student chooses a different selection from *What are you Doing with your Life?*,[2] writes a paper about it, reads it to the class, and leads class discussion on the topic. The goal is for students to deepen their own investigation into a topic that has meaning to them with the aid of a selection of Krishnamurti's writings on that topic, be it death, love, family or anything else.

A final and recurring aspect of our engagement with Krishnamurti's work is to play with some of his suggestions on cultivating awareness of our thoughts, feelings, and bodies. I ask students to observe their thoughts and feelings three times each semester and to write about the experience, including once writing down all their thoughts and feelings as they occur (in a nice dramatic touch students burn these thoughts afterwards). As instruction we take Krishnamurti's own writings on these activities.[3]

In the religion portion of the course students learn about the beliefs and practices of Hindus, Buddhists, Jains, Sikhs, Jews, Christians, Muslims, Taoists, and Confucians, as well as about smaller 'faiths' such as Scientology, Rastafarianism, Voodoo, Santeria, Wicca, African Religions, and so on.[4] We focus on the religions of India during the first semester in order to start preparing seniors for their winter trip to India.[5]

Two papers are meant to ensure that the focus in this portion of the class, too, is on self-reflection and observation. Students write a Spiritual Autobiography paper on the question: "What experiences, circumstances, people, travels in your life have contributed to your worldview, and why and how specifically did they do that? Reflect on your own life experiences and on the process by which 'you' create (ultimate) meaning out of them—don't just list your beliefs."[6] I also ask students to visit a religious service of their choice and to write a site-visit paper about the experience, so that students see that religion is as much about practice, shared experience, and community as it is about ideology. Finally, students select a religious topic of their choice and present it to the class.

We also spend some time looking at modern atheism, as articulated by people such as Sam Harris, Richard Dawkins, Christopher Hitchens and Ayaan Hirsi Ali. Interestingly atheist critiques of religion are often similar to Krishnamurti's, but where atheists conclude that there is

nothing, Krishnamurti still holds that there is something sacred. Of all the possible critiques of Krishnamurti, many from the traditional religion corner, atheism is perhaps the most successful and in any case the most interesting to use in the classroom for the sake of discussion.

From atheism it is only a small step to ethics. In the ethics portion of the course we look at questions such as: What is right action? How should I act in the world? How and who should I be in the world? What should my response be to complex ethical dilemmas such as abortion, euthanasia, the death penalty, animal rights, human rights, poverty, hunger and environmental issues such as global warming? What is my responsibility in facing my life, my relationships with other people, with other forms of life, with ideas and knowledge, with myself? As our guide we use Peter Singer's *Writings on an Ethical Life*.[7] The goal in this part of the course is for students to develop their ability to think analytically and logically and to learn how to build coherent well-reasoned arguments. Students again pick their own topics to explore, write a paper on them, present them to the class, and lead class discussion.

Class discussion is a central part of the *Religion, Culture and Ethics* course. On the one hand we discuss to deepen our understanding of the course material, and to be exposed to, and occasionally debate, different points of view. At Oak Grove School, however, class discussions have another component: learning about ourselves and others.[8] The intention behind this aspect of class discussion is twofold: firstly to create a supportive environment where we can help the person speaking to go deeper into what is alive in them and help them verbalize that; and secondly to create an atmosphere where we look afresh at what is going on inside of us, trusting that we can discover new understandings and insights about who we are. To facilitate and deepen the group communication process we draw on Marshall Rosenberg's ideas on empathy and nonviolent communication and occasionally practice them in workshops in class.[9]

At Oak Grove School we offer our seniors a unique social studies course which affords them many opportunities to reflect on their thinking and engage the ideas of humans throughout time, from all over the world, on all the timeless questions, with a high regard for freedom of expression and fearless exploration. Academic standards and expectations are high: students write four indepth papers and engage the works of leading philosophers and scholars on a variety of topics at a level more typical of undergraduate university work. But more than just knowledge is at stake: what students discover about themselves and others will shape their lives and the world to come. It may be too much to expect students to come out of the course 'free of all the illusions that thought has created to see something really sacred that

comes about through right meditation.' It is certainly not too much to expect them to recognize a powerful, challenging thesis sentence when they see one, and engage with it fully.

01 The interview is published in J. Krishnamurti, *Questioning Krishnamurti* (San Francisco: Thorsons, 1986), pp. 190–199.

2 J. Krishnamurti, *What are you Doing with your Life?* (Ojai: KPA, 2001) In future, I will be using the book by Raymond Martin, *Reflections on the Self* (Peru, Illinois: Open Court, 1997).

3 See for example: Ojai, 3rd Public Talk, 28th May 1944; Ojai, 5th Public Talk, 11th June 1944, Bombay, 8th Public Talk, 7th March 1948; and New Delhi, 5th Public Talk, 18th January 1961. At Brockwood I used to teach a course called "Self-Observation" where I used these materials. Thanks to Gopal Krishnamurthy for bringing them to my attention again.

4 We use an excellent textbook that focuses on the experiential aspects of religion: Michael Molloy, *Experiencing the World's Religions: Tradition, Challenge, and Change* (Boston: McGrawHill, 2005).

5 Generously made possible by the support of Friedrich Grohe and the KLI group and by the hospitality of the schools we visit.

6 Quoted from the course syllabus. Anyone interested in receiving a copy of the syllabus can contact me.

7 Peter Singer, *Writings on an Ethical Life* (NewYork: Ecco, 2001).

8 As expressed in Oak Grove School's *Art of Communication and Art of Engagement*. These are two of six Arts of Living & Learning that we use to clarify Oak Grove's unique orientation to learning. For more detail see Meredy Benson Rice's article "Oak Grove School: The Art of Living & Learning" in this issue.

9 See: Marshall B. Rosenberg, *Nonviolent Communication: A Language of Life* (Encinitas, CA: PuddleDancer Press, 2003). Jacob "Jaap" Sluijter runs several workshops for both students and adults. See http:// www.transformingconsciousness.org/ for more information on their content and on how he incorporates both Krishnamurti's ideas and nonviolent communication in them.

Teaching Academy, Ojai 2009

Gopal Krishnamurthy, Michael Lommel, Susan (Sunsong) Clark

Krishnamurti suggested that, 'Education can be transformed only by educating the educator, and not merely creating a new pattern, a new system of action.' Around this challenge, a group of educators participated in a two-week intensive Teaching Academy in the summer of 2009, at Ojai, California. The programme consisted of two distinct yet complementary week-long sessions: 'Re-envisioning Education' and 'The Art, Science and Craft of Teaching and Learning'. The intention of the Teaching Academy was to provide grounding for new educators and renewal for veterans in the educational field.

Educators in the Krishnamurti schools have taken up the challenge of envisioning a school and classroom environment that isn't determined by reward and punishment, evaluation and the authority of knowing. But we have generally segmented these educational considerations around the students' experience. One underlying theme raised in the Teaching Academy was how the investigation of learning and the aims of education directly applies to teaching itself—and how educators themselves learn and explore the art, science and craft of teaching without recourse to prescribed methodologies of teaching. One of our morning readings of Krishnamurti reflects this theme (emphasis added):

> Let us not think in terms of principles and ideals, but be concerned with things as they are; for it is the consideration of what it is that awakens intelligence, and *the intelligence of the educator is far more important than his knowledge of a new method of education*. When one follows a method, even if it has been worked out by a thoughtful and intelligent person, the method becomes very important, and the

> children [and teachers] are important only as they fit into it. One measures and classifies the child [and teachers], and then proceeds to educate him according to some chart. This process of education may be convenient for the teacher [school boards and administrators], but neither the practice of a system nor the tyranny of opinion and learning can bring about an integrated human being.
>
> *J Krishnamurti: Education and the Significance of Life*

Thus, there is no particular teaching methodology (be it standardized testing, lecturing, student-centered learning, project-based learning, thematic integration or inter-disciplinary curriculum) that is going to address the core of what learning, and therefore teaching, is. This focus on teacher learning does not necessarily preclude the use of teaching methods—teachers do use different approaches, styles and have different methodological orientations—but it accords it with a peripheral and provisional role as it is discovered by the teacher's own ongoing inquiry. A question that wove itself throughout the Academy as an aspect of 'Re-envisioning Education': How will teachers live, learn and work together, as a non-methodological culture in a school, not only with students but among themselves as inquiring colleagues, learning all the time?

Educational timelines and claims about learning

The issue of the learning of the educator took life in several ways. Academy participants reflected on and recorded their own 'Educational Timelines'—richly descriptive, but not evaluative. (For example, not "I had a horrible teacher in 7th grade," but "I remember feeling afraid in my 7th grade class for having wrong answers, because it was structured to reward right answers.") Towards constructing our educational timelines, we determined what turning points we found in our own educations. Using the timelines and readings we had done up to that point, we each generated claims about learning: "Learning happens when…", "Learning is…", "Learning is not…." From these claims we each distilled and selected five claims about which we felt strongly enough, that we would send our own children to an environment that reflected those claims or would leave a school if they weren't possible there. We also reflected on five claims we each found in Krishnamurti (e.g. "learning is not memorizing", "learning is not additive", "learning is action", "learning is in flashes"). One reason for dwelling on claims about learning is that clarity about learning sets the stage for an urgent and immediate act of

teaching ("If learning is…then teaching is…"). Indeed, Krishnamurti speaks of 'teaching-learning' as one process.

Generating aims of education

We worked from our claims about learning to generate Aims of Education. For example, some of the aims of education were: for students to 'find out what they love to do'; 'to create freedom in the individual'; 'to look at ordinary occurrences in life in an extraordinary way'. We also grappled with the distinction between goal oriented aims and educational intentions where the educative means are themselves the ends of education, as reflected in a participant's claim that "learning is at the beginning and not at the end". Then, inspired by the film "School Without Walls" about the school-in-a-box project founded at Rishi Valley Educational Centre, we each attempted a skeletal design of our own school (or classroom)-in-a-box, describing or crafting ten components to directly reflect our intention for education. We then paired up and 'ruthlessly' questioned each other about our intent, and how and whether that was reflected in our school-in-a-box components.

Another thread of conversation was an appraisal and re-envisioning of persistent 'problems for schools' and conventional 'responses' to these problems. For example, questions about motivation, relevance, accountability and differences amongst students and amongst teachers are met by standard responses such as reward and punishment for teachers and students, sequencing of subject matter, grading and evaluation, sorting and ranking of student and teacher abilities. These problems can be mapped individually (one-on-one) to their corresponding responses or as an entire collection of problems to a system of solutions provided by the design of the school. We looked critically and carefully at the origin of the 'problems' themselves and at the efficacy and outcomes of such standard responses—do they achieve what they claim to achieve? What are the consequences (intentional and unintentional) of these responses to the lives of the teachers, students and society at large? Our daily grappling with the intents of education provided the impetus to figure out and re-configure alternative responses for schools and classrooms. As a group, we then worked to merge all our individual aims into a single statement of intent for education. We ended up with:

> To create an environment of inquiry, learning, and teaching free from comparative evaluation in which observation, investigation, understanding, flowers—into the self, the world, and our relationship to all things.

The point is not that this is well-expressed, right or wrong. This activity of jointly articulating our learning claims and educational intent actually served to uproot our educational assumptions. It also revealed in a concrete way that our commitments were at best a "raid on the inarticulate" and that the "word is not the thing". Participants were asked throughout the two weeks to "make a claim" or "place a stake in the ground" not to become certain, but to reveal our assumptions and place our educational commitments on the table for questioning. This way, the gap between our ideals and our actual modes of teaching and learning could be illuminated. Vastly different learning environments could come from any educational mission statement such as the one above. So, what then brings about a culture of learning (and therefore a culture of teaching)?

Micro-lessons, classroom observation and teacher review

Participants also created presentations and 'micro-lessons' (one-two minute lessons) for the whole group. The micro-lessons were filmed for later group observation. The challenge was to understand what it means to observe classroom activity carefully and to tie our interactions and activities to what our educational intentions might be. Earlier, before the micro-lessons and video observation, we had watched a video of a classroom with the task to look—very minutely, very precisely—at what was happening (eye gaze, turn taking, gestures, discourse, speech tone and inflection). The attempt was to look at the video without our habitual judgments or evaluative appraisals (e.g. "That teacher is teaching poorly; I would do x, y or z", "she is such a gifted teacher", "these are smart kids") but rather to provide a thickly descriptive account. An idea from Dr. Jason Raley, (friend, mentor and faculty member at the Teacher Education Program at the University of California Santa Barbara) became relevant here: "Everyone makes sense". That is, there are reasons for people's actions, even if we are unable to apprehend or comprehend them. This empathic orientation informed our observation, and transformed our habits of evaluation and judgment to reveal the underlying dynamics, intentions and consequences of what actually happens in a classroom.

More often than not, teacher education programs, even progressive ones, prescribe educational aims, methodologies, evaluations and motivations for teaching. For example, a teacher education program may promote 'student-centred learning' or 'inquiry-based learning' in the education of students, without robustly mirroring these same aims in the education of the teacher and the process of implementing the program itself. Thus prescriptions of

even the most progressive methodologies often do not allow for the teachers themselves to engage in a process of inquiry and discovery. Typically, in such programs, teachers ask for and are given evaluative feedback on their teaching, either based on some standard metric or on a more progressive rubric (inducing them to be on their 'best behavior' for the review/evaluation). An alternative is to envision a teacher education program itself as a crucible for investigation, where the teachers are involved and immersed in a process of discovery and re-discovery, for themselves, about the nature of teaching and learning. For instance, in the academy a teacher said, "I see that when I was afraid (as a student in school or teacher in the classroom), there was no learning…." Having seen the implications of this and the kind of atmosphere the teacher wanted to create in the classroom, rather than ask others for "tips and techniques", the teacher framed her own questions for peers intended to focus their observations and provide meaningful, self-generated feedback. Rather than ask, "Am I being authoritarian in my classroom?", a question which elicits opinion-based, evaluative observation and feedback, another teacher asked instead: "Could you observe my class and tell me how and in which contexts I use 'should', and whether I respond to students' questions only with answers or with further questions?" The feedback solicited is then observational, rather than implicitly judgmental, and is tied directly to the teacher's intentions and inquiry, rather than being a new intention imposed from without. Moreover, this affords the teacher the opportunity to provide feedback to his/her reviewer about the review itself. This mirroring of educational intent and reciprocity in the process of educating the educator is crucial for the coherence of any teacher education program.

Additional ideas

Below are some other ideas of the Academy (which, while they merit further consideration and exploration, are discussed only briefly here).

Learning is not a scarce resource.

Learning is sometimes seen as a zero sum game. A 'zero sum game' is an interaction in which one party's success necessitates another's loss, or entailing the division of a limited resource. In education, it means that someone else's success at learning is my failure, as happens sometimes in curve fitting, teacher attention, limited college admission and enrollment. Is learning actually a limited resource? What would a school or society that rejected this assumption look like?

Learning is not measurable.

The claim is that learning or skills cannot be measured, except in an arbitrary context, and further that any chosen context will necessarily exclude someone else's measure of skill or learning arbitrarily (there is no 'true' context). As Krishnamurti puts it, "Knowledge is measurable, more or less, [the claim is much less than we may think at first sight], but in learning there is no measure." What is striking about this claim is that it undercuts not only the ubiquitous trust placed on standard testing and measures of success (and failure!), but also a very broad range of the measures employed in progressive education with varied and innovative rubrics of assessment. If this claim is true, and if we care firstly about learning as an end in itself and not measures of success (of any kind), what would such a school look like?

Inquiry is not asking 'Known Information Questions'

Although many educators and teachers who have come across Krishnamurti reject the conventional notion of a child as an empty vessel to be filled with knowledge by the teacher's instruction, a major part of teaching still seems to involve the transfer of known information—even when framed as questions. What implications does this have for students' and teachers' inquiry and learning? Can teachers ask and sustain questions in the classroom that they themselves don't know the answers to? Can teachers do this amongst each other with regard to teaching, learning, and the life and vision of a school as a whole?

Finally, here are three questions that came to life at the Teaching Academy which we would like to leave you with.

What does a learning environment look like that is not driven by a method?

If we accept that learning cannot be measured, what then is academic excellence?

Can I, as a teacher, ask my students questions to which I do not know the answer?

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Teaching Academy: A Participant's Perspective

Mary Heerin

To educate another, you must re-educate yourself, a strenuous task.

This statement is, perhaps, widely understood by most teachers who have been in the classroom for more than a few years. But in the midst of the busy school year, it is somewhat less often brought into an active or deeply reflective dimension. When Bill Taylor and Adrian Sydenham, the Co-Principals at Brockwood Park School, offered me the chance to attend this summer's Teaching Academy at Ojai, I could see that this was one of those opportunities to stir up the spirit of inquiry and reflection about what I was apparently spending most of my days doing—educating, teaching and hopefully, learning.

No one who arrives at Ojai for the first time could fail to be struck by the natural setting of the place: a fertile valley of orange groves and avocado trees

surrounded by stony mountains and canyons which provide the silhouettes for the daily inspiration of the sunset. An air of resilience is evident in the sculptural displays of agave, cactuses and succulents which line the roadside, in sharp contrast to the easy greenness of the Hampshire countryside around Brockwood. It was not difficult to imagine that, somehow, this extraordinary air and light might bring about a clarity and sharpness of focus as well as a sense of renewal. We were privileged to be able to use Pine Cottage for the Academy with its natural light and spaciousness and fortunate to have Gopal Krishnamurthy and Karen Hesli to facilitate it. They complemented each other perfectly, bringing their passion, playfulness and insights to the course. I was also delighted that the other participants were not only from four of the five continents but that they came from varied backgrounds, all brought together by a deep interest in education but by no means all teachers; this lent a richness to our discussions and learning.

We spent the first week formulating our 'burning questions' about education and reflecting on the turning points in our own experience of learning with Timelines, which informed many of the subsequent activities. We then generated 'claims' about learning, from our Timelines and the reading of one of the core texts, 'Education and the Significance of Life' by J Krishnamurti, and prepared a short presentation. I chose to focus on when learning can be effortless, when motivation is not an issue and competition is removed, when momentum and discipline are sustained by the learner. This also led me to consider the role of a teacher: is it to set learning goals, create and assess structure; or is it to facilitate, guide and give feedback? In the same week, Gopal had asked his class of MEd students at UCSB to prepare one-minute mini-lessons and we spent an enjoyable afternoon with the class, sharing our personal views on education and seeing their skillful and generally entertaining mini-lessons. These young people just starting out as teachers impressed me with their enthusiasm, openness and ability to articulate and question their ideas.

I particularly gained a lot from the emphasis on communication in the course. Karen's introduction to Non-Violent Communication, firmly anchored in observation and emphasizing facts over judgment, and the practice we gained from the role plays, gave me an effective tool to use in bringing order and compassion into misunderstanding and conflict in an educational setting. Council and Dialogue were new to a number of people in the group,

and this brought a refreshing quality to them; a particularly memorable and spontaneous one being on the subject of fear, prompted by the arrival of a rattlesnake to the place we ate our *al fresco* lunch. Many of our exchanges continued over the delicious and abundant meals, cooked for us with love at Oak Grove School and delivered by Gabriel, one of the graduating students. In addition to these impromptu conversations, I greatly appreciated the opportunities to meet and talk with other members of the Ojai community, from veteran teachers to parents and administrators, in panel discussions and presentations.

The second week's theme of observing and crafting lessons compelled us to sharpen our skills of describing exactly what is going on in classroom practice. We tried to use only descriptive language, and to be specific in our aims for learning, as reflected in the micro-lessons we planned to reflect those aims. These activities were, I feel, especially relevant to those of us who were more accustomed to the idea of observation in the classroom as a method of evaluating teachers, involving judgment and comparison rather than mutual support between colleagues.

Over the two weeks of the Academy a tremendous atmosphere of affection and trust grew amongst the participants, and one could see how a sense of truly working together can foster a teaching and learning community. This, for me, was one of the most important things I gained from the course, as well as a notebook filled with questions to keep me going for a long time.

BOOK ANNOUNCEMENT

What Did You Ask at School Today?

BY KAMALA V MUKUNDA

Published by Harper Collins India, New Delhi

This is a readable book on the psychology of child development and learning, written for the context of Indian schools. Research in psychology spanning the last thirty years or so has been summarized around the questions and themes that teachers, educators and parents face on a day to day basis. Using a step-by-step approach, and giving varied examples from school situations around the world, the book unravels interesting questions on learning, memory, intelligence, child development and emotional health.

From the book: "...a study of psychology can help us take our 'small' questions (about our particular students and classrooms) and fit them into the bigger, eternal questions of intense psychological debate. From 'why doesn't she remember this?' to 'what is memory all about?'; from 'does he have the ability?' to 'what are we born with?'; from 'have they understood?' to 'how is knowledge constructed?'; these are short steps. It is exciting to see the connections between our work as teachers and wider social and philosophical issues. It reminds us that teaching is at the heart of what it is to be human."

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