

New Design Option for Himalayan Dams - Concrete Faced Rockfill Dam (CFRD)

This type of dam design is becoming increasingly popular in recent years. A number of such dams have been built in Brazil, Columbia, Australia and, nearer home, in Sri Lanka, Malayasia and Thailand. In this type of dam design, the reinforced concrete slab on the upstream face constitutes the impervious membrane, with main dam body consisting of exclusively rockfill. Structurally this design is different from the conventional earth core rockfill dam. In case of CFR dam, the water thrust acts externally on reinforced concrete face, contributing to increasing the stiffness and stability of the dam. As a result, much steeper dam slopes (1:1.4 to 1.6) are attainable in case of such dams, making this design a least cost option in many situations.

The successful performance of this type of dam depends on

- material quality
- degree of compaction of rockfill
- successful construction of face and toe slab, and water-tightness of their various joints

Detailed guidelines on design and construction of CFR dams are now available. Based on these guidelines, modern CFR dams have been constructed all over the globe and are giving very satisfactory performances.

With regard to behaviour of this type of dam under strong earthquake motion, the design is considered inherently safe by many designers against potential seismic damage on following counts :

- The entire embankment in case of CFR design is dry and hence earthquake shaking cannot cause pore-water pressure build-up and strength degradation.
- Unlike a conventional earth core rockfill dam, water pressure acts externally on the upstream face and hence, entire rockfill mass acts to provide stability.

Many researchers (Seed, Gazetas, Bureau et al.) have carried out extensive analytical studies on the anticipated response and performance of modern CFR dam, thus bringing out some important aspects of behaviour of CFR dam under seismic excitation. Seed has also recommended slopes for CFR dams for earthquakes of upto 8.5 magnitude in seismic areas. On the basis of these studies, the conclusion is that crest settlements of modern CFR dams would

not exceed 1% or 2% of dam height under the most severe earthquake. According to Sherard and Cooke, this would be an acceptable performance, since a sudden crest settlement of $0.01 H$ (H is the dam height) will not threaten the safety of a modern CFRD.

Theoretical response analyses carried out for a CFRD by Gazetas, to study the 3D stiffening effect due to presence of rigid abutments, indicate the possibility of sharp increase in acceleration in near-crest portion of the dam, which increases as canyon becomes narrower. This may result in deformation problems-profile distortion, cracking, etc. To minimise such problems, a number of defensive measures - ample freeboard, widening of dam crest, flattening of slopes have been suggested. No corroboration of such conclusions is possible from actual experience, since so far, no CFR dam has been subjected to any substantial ground shaking. It is, however, obvious that defensive measures can be inbuilt into CFRD design to withstand the most severe earthquake shaking, taking care of any possible adverse impact.

The popularity of CFR dam is bound to increase in the coming years. At Himalayan dam sites, where impervious material for the clay core (required for a conventional rockfill dam design) may not be always available at nearby locations, such design would offer the most economical solution. Dam designers have, therefore to think of this design for many of the future dam sites in Himalayas. To begin with, this design can be adopted for diversion and storage dams of moderate height (say upto 100m). As more experience builds up, this design can be considered even for higher dams. Cooke advocates this design concept for dams of even upto 250 m height. Our national earthquake engineering research centre at Roorkee can also focus more attention on applied research on CFRD design to provide the needed inputs to dam designers in future.

A rather bold and unusual feature of high dams constructed in Central Asia, e.g. Narek, Rogun and Charvak dams, has the provision of inspection galleries and shafts running along most vital part of the dam, i.e. its core (in earth and rock fill dams), to constantly monitor performance and, in event of any distress, to take prompt remedial action. Gallery is provided in high Aswan dam and proposed in Tehri Dam.

What needs to be appreciated is that no dam structure designed and constructed on the basis of modern technology has ever failed (and settled significantly) as a result of earthquake shaking.

- B. L. Jatana, Former Engineer-in-Chief, U.P.Irrigation Deptt.
Source: Jatana, B.L. (1999), Fail-safe Large Dams in Earthquake Prone Himalayan Region, *Journal of Earthquake Technology, India*, Vol.36, No.1, pp. 1-13

World's Longest LPG Pipeline in India

The commissioning of world's longest LPG pipeline in the western part of India, spanning over 1,250km will bring down the diesel bill by Rs 1500 million every year. The Jamnagar-Loni LPG pipeline will go a long way in minimising hazard to populace, checking pilferage, enhancing efficiency and safety. The supply will be pollution free and economic.

The pipeline runs through five different Indian states namely Gujarat (522km), Rajasthan (630km), Haryana (75km) and Delhi (5km) before touching Loni in Uttar Pradesh (37km). As many as 23 rail tracks, 85 national highways and 44 state highways are covered in the route. Gas Authority of India Limited (GAIL) has used state-of-the-art technology to ensure minimum disturbances to traffic and normal life. Horizontal direction drilling has been utilized to cross Yamuna river.

The initial capacity of the pipeline is estimated to be 1.7 million metric tones per annum (MMTPA), which might be enhanced to 2.5 MMTPA later. The daily supply through the pipe would be equivalent to half a million LPG cylinders. LPG was taken to GAIL's Jamnagar terminal on August 15, 2000.

Envisaged in 1997 by GAIL, this ambitious project (approx. cost Rs. 12,300 million) has been completed ahead of schedule. It was proposed that LPG would be transported from western region of the country to northern states. The work on the project started in October 1999 and it took less than one year to complete.

Source: The Hindustan Times, Dec. 26, 2000

Scientists Develop Material that Repairs itself

Researchers have developed the first material that automatically repairs itself, offering a potential way of fixing the hairline cracks that develop in the space-age composites used in everything from tennis rackets to aircraft. The scientists' secret: tiny capsules of glue that are added to the composite material.

"It has just an enormous number of applications. That's probably one drawback for me, I don't know which direction to go," Scott White said, a professor of aeronautical engineering at the University of Illinois at Urbana-Champaign who led the study.

Composite materials consist of fibres of glass, carbon or other substances mixed with a resin. Fibreglass is one type of composite. Some tennis rackets and golf clubs are made of graphite composites. Damage to composite materials often begins as tiny cracks. As they grow, they weaken the material

until it breaks. To heal tiny cracks automatically, the Illinois researchers sprinkled capsules about the thickness of a human hair throughout an experimental fibreglass-like compound. When a crack appeared, capsules in its path broke open, spilled their contents and sealed the cracks.

The compound retained 75 percent of its original strength after the cracks had healed for 48 hours, the researchers have reported. The study was published in the current issue of the journal Nature.

The new material “nips the damage in the bud,” Richard P. Wool, a University of Delaware researcher, said in an accompanying commentary. The material is not yet ready for commercial production, however. High temperatures stop the setting agent from working, and the curing time is too long for many applications.

While all of the capsules will eventually break, objects made with the material could last several times longer than those made of current composites, Wool said. Materials such as the self-healing composite are part of the infant field of smart materials.

Objects such as spacecraft, artificial joints and bridge supports, which are difficult or impossible to reach, are prime candidates for self-healing materials. White said researchers are also exploring the use of the material for computer circuit boards, many of which come off the production line with small cracks that make them unusable.

Source : The Times of India, Feb. 16, 2001

Seabuckthorn Holds Key to Eco-Conservation

Research conducted during past seven years by the scientists of Himachal Pradesh Agriculture University (HPAU), India on the utility of seabuckthorn, locally known as 'chharma', have shown encouraging results which promise to revolutionise the economy of the area and other Himalayan states.

In addition, seabuckthorn, which grows in cold desert of Lahaul-Spiti, Kinnaur and Chamba districts of Himachal Pradesh besides Ladakh, also holds the key for environmental conservation of degraded hills of the cold Himalayan desert, which during last five years has changed reportedly due to global warming.

The scientists say that cold desert is receiving less snow during the winter as a result of global warming. Consequently there is less water availability for irrigation, higher rainfall during summers, landslides, roadblocks and soil erosion. This is hampering the economic process and threatening the very survival of populace of the region.

It attracted global attention in 1983 when it was revealed that drugs and food products made from seabuckthorn were being used by the Russian astronauts during oxygen deficiency in space flights.

Subsequent research works found seabuckthorn to be quite rich in vitamins and other bioactive substances.

According to experts, seabuckthorn industries have been developed producing a range of medicines curing cancer, blood pressure, heart problems, ulcers, and skin problems. Besides medicines cosmetics, wines, dyes, tea, and health protection food products are also being manufactured from seabuckthorn.

They pointed out that Pakistan has also made tremendous progress in establishing seabuckthorn-based industries.

Dr. Virendra Singh, responsible for pioneering work on seabuckthorn, says that it can play a pivotal role in negating the effects of global warming as seabuckthorn is indigenous to the region, growing on river sides, slopes and fields in cold desert.

Seabuckthorn is found on 3,000 hectares in Himachal Pradesh, and more than 20,000 hectares in Numbra valley and other parts of Ladakh. He says, seabuckthorn having well developed root system goes three metres vertically and ten metres horizontally, producing nearly 40 sister plants of several generations that holds soil preventing soil erosion.

Importantly, Himachal Pradesh has also constituted a task force credited with the job of making headway in this field. Sustained efforts have led to introduction of a mild thorny and high yielding exotic varieties of seabuckthorn.

The scientists feels that development of appropriate processing technology for products including drugs for industrial utilisation of 'chharma' in country was a lengthy process therefore, we need to collaborate and transfer the technologies from countries like Russia, China, Finland, Germany and Canada.

Source: Hindustan Times, Aug. 26, 2000

Earthquake Warning Possible !

It is impossible to accurately predict an earthquake, but a warning is possible many times says Dr. Soumitra Mukherjee, associate professor at New Delhi's Jawaharlal Nehru University's (JNU) school of environmental sciences.

Mukherjee, who is researching on geological remote sensing applications based on the data provided by National Aeronautics and Space Administration

(NASA) said, “A set of data provided by NASA on Jan. 24, 2001, which I saw after the Gujarat quake and co-related with my hypothesis, clearly showed that there was a possibility of an earthquake within two-three days.

He said the forewarning about many earthquakes is based on the “rise in sunspots” and on the “coronal mass ejection” (the emission of particularly large amount of energy from the outer surface of the sun). The rise in sunspots and the coronal mass ejection are co-related, especially if pointed towards the earth’s active faults.

According to Mukherjee’s hypothesis, the high period of active sunspots that cause this mass ejection, act as a catalyst, by releasing enormous amount of energy from the sun. This energy then affects the magnetic field of the earth.

Most of the times, the magnetic field of the earth is quite strong enough to withstand this energy from the sun, but sometimes it buckles under continuous coronal mass ejection. Once it crosses the earth’s magnetic field barrier, it catalyses the earth’s active faults. The affected magnetic field of the earth, in turn creates pressure on the crustal blocks, causing the sub-surface of the earth to shift, thus causing an earthquake.

NASA’s January 24 data shows that the coronal mass ejection was pointing towards the earth, Mukherjee said. “The coronal mass ejection may not be the only reason for the earthquake, but it triggers off huge movements in the tectonic plates, causing the earthquake,” he added.

He claimed that he had forewarned about a quake in Delhi, which came true on November 17, 2000 when Delhi experienced an earthquake of intensity 2.9 on Richter scale.

Elaborating on the causes of the mass ejection, he said, “The sun’s activity is governed by solar cycles. Every 11 years, sun’s activity reaches solar maximum. During maximum solar activity, the sun ejects solar flares and coronal mass, which can affect the magnetic field of the earth. From 1999 there was a rise in the number of spots. Till April 2001, it will be at its peak and then it will go down by about 2006.” Hence the possibility of some more after shocks of high intensity till April 2001 are there.

Source : The Times of India, Feb. 22, 2001

Animals in Gir had Inkling of the Bhuj Earthquake in Gujrat, India

Though mankind never had the slightest inkling of the impending earthquake in Gujarat, the animals were forewarned of the tremor. This was evident from the unusual movement of the animals including lions in the Gir forest, India.

Deputy conservator of forest Mahesh Singh and some forest officials were eyewitness to such a behaviour. “The animals in the 1,382 sq. km. area had started the unusual movement from the night of January 25 and it continued till the morning of January 26,” the officials said.

The stillness of the Gir forest, the only home to the Asiatic lion, was breached with loud roars and shrieks of wild animals.

Singh said, “the lions, leopards, chittals and deer in the jungle started crying loudly and running helter-skelter.

The roar of the lions was deafening and they too ran with their tails up and erect.”

The field staff in the jungle were unable to understand this unusual movement initially.

Singh was camping at Jamva on that night and he saw the snakes, coming out of the holes and climbing the trees. The Sakarbaugh Zoo authorities on the outskirts of Junagadh said that the crocodiles had also showed such a behaviour and were turning and tossing in the water.

Source : The Times of India

Vision of Information Technology in India

	<i>Present Level on 31 March 2000</i>	<i>Target 2008</i>
Total Number of PCs	4.3 million	20 million
Internet Subscribers	0.77 million	35 million
Internet Users	3.2 million	100 million
Cable TV Subscribers	37 million	70 million
Fixed Phones	26 million	125 million
Television Sets	75 million	225 million

	<i>Present Level on 31 March 2000</i>	<i>Target 2008</i>
Software Industry in India	\$ 5.7 billion	\$ 87 billion
Software exports from India	\$ 3.9 billion	\$ 50 billion
I.T. industry in India	\$ 8.6 billion	\$140 billion

Source: Hindustan Times, Nov. 24, 2000

Life found in Meteorite

According to NASA scientist, fossilised micro-organisms have been found inside a meteorite that crashed to earth in Australia 30 years ago. New technology was used to discover the fossilised alien life forms, which were found inside a 4.6 billion year-old meteorite that landed near the Victorian town in 1969. The head of NASA's astrobiology unit at the Marshall space flight centre, Prof. Richard Hoover, told that he believed the organisms were bacteria capable of surviving in extreme environments. He said that life could have first evolved elsewhere in the solar system, before a meteorite seeded the earth. A second possibility was that a meteorite striking the earth may have thrown debris into space, where it fused to passing asteroids or comets. Pictures of the meteorite were similar to micro-organisms discovered living in thermal springs and beneath the ice in Antarctica.

Source : Hindustan Times, Dec. 19, 2000

Hotel on Everest !

It will be the first hotel on the Mount Everest, and naturally the highest in the world. Planning permission has been given to Russell Brice, 49, a New Zealander climber for constructing a 52-room hotel on 22000 sq ft area in the Rongbuk Valley, 17000 ft above sea level on the Tibetan side of the Everest.

It is estimated to cost £ 2.3 million and digging at the site will start in April 2002.

Brice, who has been climbing and running expeditions on the Everest for 20 years, claims that the hotel with rooms starting at £ 70 a night will be a flagship of green building techniques. But many other climbers and mountaineers are sceptical. They feel that a hotel for a base camp will turn the area on the Everest into a theme park.

Brice told that a decade ago he had thought of a hotel on Everest. He was very impressed by a make-shift camp set up by Swedish climbers. It made sense that it would be very good to have this sort of set-up permanently, to serve not only other climbers, but also the majority of tourists who visit the base camp for a short time. Brice first approached the China Tibetan Mountaineering Authority (CTMA) people in Lhasa alongwith his Nepalese partner Ang Tshering Sherpa.

The negotiations led to an agreement for a joint enterprise to build a lodge at the base camp.

But, thereafter Brice had to seek approvals from 88 other government authorities before he got the permission for the hotel. Buddhist monks,

according to the report, have blessed the site and advised on traditional Tibetan design.

Alan Argent of the Britain-based consulting company, Quantum Partners, which is involved in the scheme is quoted saying. "the criteria was to create a traditional and sympathetic scheme which involved the local community."

The still un-named hotel will have eight bedrooms and six chalets with 36 beds. Room tariff will start from £ 70 per night. Local cuisine will be served in the hotel restaurant. There will be a bar as well.

Source : Hindustan Times, Jan. 8, 2001

The Future of Life in the New Millennium

Imagine thirty years ago being told that in the year 2000, a small piece of plastic would enable you to make a telephone call from anywhere in the world to anyone in the world. It sounds incredible but today's mobiles incorporate technology that is quite astounding. As we enter what some are calling the 'Zeroes' (the opening years of the new millennium), you may find another small piece of plastic on which you can play your favourite music. Then look on your wrist and it is possible that you are wearing the latest digital watch featuring GPS (global positioning system) which can pinpoint your exact location on the planet via the satellite. These are not futuristic, fantasy predictions but reality. It won't be long before you have the world, literally, at your fingertips and the ability to communicate, at work and play, in one all encompassing piece of technology the size of a chocolate bar. Here, inside a huge floating hotel you will travel to another continent. After landing, you will drive your car off the airship to a carpark to phone your partner and say that you will be back in time for dinner. Images of your meal can be transmitted to you on your videophone/personal computer and you will be able to say that you are looking forward to your meal (but you don't like the colour of the new dinner plates). Step back inside your special, computer-controlled, computer-designed hotel room (back on the airship) and watch a film on a screen thinner than a magazine and about the size of your wall. Gas-plasma television screens are now in the market, producing giant images with precision sound and crystal-clear vision. Then you may want to slip on your virtual-reality glasses and step inside your soon-to-be-designed new home. You can then test the staircase, move between rooms and check out the decor, before it is even built. All of these amazing inventions are either already available or on the drawing board somewhere in the world. The concept of an airship style-floating hotel carrying up to 2,000 people and flying to any continent is already being developed. But in keeping with now-familiar visions of the next century, watch out for the first space-theme restaurant; perhaps using the latest technology to create its own special gravity and atmosphere with floating tables and waiters and a menu that offers crater pie, chocolate

rock pudding, and moon meringue. Now you have your futuristic lifestyle, and all the gadgets to go with it. Naturally, you don't work in the office anymore; you are mobile. With your laptop or palmtop computer, a phone the size of a matchbox, and a car small enough to park in the cycle shed. When you are planning your holiday, it is still possible that you will need inoculations-but you won't need to worry about needles anymore. Electronic injections have arrived, with no puncturing of the skin needed. The music industry has been using computer technology for years, not only to compose music but more importantly to enhance the sound quality for recording. Many different formats are available but the latest thing involves downloading single or multiple tracks from the internet, and creating WAV (digital audio) files. Perhaps high-tech equipment for everything for work or play, is our ultimate goal. We may then end up as less sociable, self-contained and isolated people. Hopefully, as we improve our work and leisure environments, we may become more sociable. Then our only problem will be to decide when to book those two weeks on Mars or Moon and which space station we will go from.

Source : IEI News, July, 2000

Prince Charles' Passion for India

It was music to the Indians' ear when Prince Charles said, "I have particular passion for the sub-continent, I don't know why but I have it. India's contribution to music, art, poetry, business and spirituality has been memorable.

"When I look towards Hinduism, a 8000 year old religion, it makes us feel small. It's invisible to the Western eye but the East understands how the two, materialism and spirituality, interlock to bring harmony and balance."

It is well known that Prince Charles not only developed passion for India, but also learnt about its traditions and values from Lord Mountbatten and that love for India continues. He has always helped raise funds for Indian charities and recently has been helping raise money for the Gujarat earthquake victims. He iterated, "The sub-continent's integrated view of the world of the material and spiritual has contributed to civilisation over so many thousands of years."

Source : The Times of India, March 22, 2001

Taj Mahal : Metaphor of Boundless Love

I had met Iris in Toronto about a year and a half back during a Sathya Sai weekly Satsang (community prayers). She told me she was in search for a Realised Master who could lead her to a union with God. She was intensely immersed into the thought of going to India, for she was convinced that's where her prayers will be answered.

I recently received the following mail from her. She was touring India in search of an enlightened guru and had just visited the Taj Mahal at Agra.

How heartbroken must the man have been at the death of his beautiful, lovely wife? The pain of unfulfilled Love, Love so pure, so complete, so dedicated. Love unstained of mind, of ego, fear, desire. Just pure Love, flowing out of the depth of the heart. The need for expression of such Love gave birth to the Taj. Pure Love, unfulfilled, always awakens the creative energy and man rises above himself to somehow unite again with that which seems far - pure Love. And Love becomes one in itself. When the lover not only loves, but Love flows through the lover. Then there is no separateness anymore. Only bliss.

At the Taj, there lies the heart of love, its very being. Its beauty and perfectness unmatched. It is truly a symbol of that pure Love, which lies deep in the hearts of everyone of us, hidden, waiting to be awakened, that Love that is one with God. That Love, that seeks nothing, wants nothing, asks nothing, but to be with the beloved, to behold his beauty, which again is Love.

One needs peace of mind to realise such Love. One needs a pure heart to see it, feel it. Only the pure can behold it. Blessed are the pure of heart, for they shall see God. That Love is faith.

The Taj is perfect in all detail, like a Tibetan mandala. There is not one grain of sand that is not in its place. And in that perfection in there is joy, there is play. It is really not a creation of this world. How happy must she have been to have received such love, how radiant and full of joy.

A purpose fulfilled. Whatever we do with this pure Love for God, God is in there. The doer, the expression of our doing, and God become one. And yet, what does it matter if I see these things. All is temporary. The moment I leave, the thing is gone. The only thing that matters is God.

True Love forgets everything. True love lives in poverty for the Beloved. True love takes on every suffering for the Beloved. And Love remains ever strong. True love can never be separated. That love is magnanimous, generous. True love is humble. There is never any selfishness. Blessed are those who suffer - for they will be comforted.

It is not the Taj that is great - but the Love that created it. It is not the body that is great, but the pure heart that dwells in it. Such love expands through all the universes. The devas of the heavens know about it and marvel at such love. If the Taj is just a structure, and what matters is the spirit of it, and the body is just a structure, and what matters is the spirit of it, the world too is just a structure. No need to get attached to it, because what matters is that we can see the divine essence permeating it. Because the manifested world is as

tiny as the Taj, but its divine essence is vast and eternal. Then why are we so attached to the world and its concepts? That which is beyond does not know such limitations.

Reading the e-mail, the thought comes to mind - Hasn't Iris already become a realised soul? How beautifully she has described the definition of "pure love" where there is no selfish motive. A material object like the Taj has turned out to be the realised Master for Iris.

This indeed is the Truth. The Master is only a medium, the real seeker is within. One needs to look inwards. See the substance, the truth behind outward appearances. This is why seekers have always turned towards the Himalayas, the Nature, for self-realisation. The mind then penetrates beyond the worldly distractions to realise the truth. But if someone can do so without having to distance himself from the material world, such a person is the greatest realised master.

Truth or God has no caste, creed, race or religion. Iris is a Christian. She is visiting a secular India where the majority practices Vedic teachings, more commonly understood as Hinduism (Hindu in reality is a geographical term used to identify people living in Hindustan or India) and is she describing an Islamic tomb.

Source : C.M. Bhandari, Consul General of India in Toronto

Empty Success

We are often so busy climbing up the ladder and reaching out for the next step, that we don't see that the ladder is leaning against the wrong wall. One problem with 'being successful' and 'beating the competition' is our inability to be spontaneous in the selection of our goals and targets - we carry out someone else's agenda. Having no goals is frustrating, but having the wrong or unwanted goal is a bigger problem. This could lead to unhappiness and misery.

Resist the temptation to work towards goals which are valued by other people - be it money, fame, power or anything else. Critically choose and then work for ends which may give you joy, satisfaction and happiness, be it for social causes or for personal development. Most of all never lose the sight of things which matter most - self-respect, honour, fairness and peace of mind. The direction of your success and efforts matters more than their speed and extent. That's the secret of being successful and happy.

- Patajali Dev Nayar, Psychiatrist

Source : The Indian Express, March 25, 2001

Happiness Keeps the Heart Healthy

Feeling happy and hopeful appears to be powerful medicine in reducing the risk of stroke, researchers have claimed.

A team at the University of Texas Medical Branch investigated the impact of positive emotions on the risk of suffering a stroke. Their study in the journal *Psychosomatic Medicine* followed 2,478 people aged 65 plus for six years.

The researchers found that subjects scoring highly in emotional well being - such as feelings of happiness and hopefulness - had significant reductions in their stroke risk while risk increased for depressed subjects.

A stroke involves loss of functions caused by a loss of blood circulation to the brain. "Positive affect (emotion) is related to a number of characteristics known to improve health or to protect against chronic disease," said Glenn Ostir, the study leader.

"Individuals who report high levels of positive affect may be more likely to exercise, to maintain a healthy lifestyle and to adhere to medical therapy." Subjects who scored highly on emotional well being had a stroke incidence that was one third that of subjects who scored zero.

Source: The Times of India, March 22, 2001

It's a Wonderful Life

A water bearer had two large pots, each hung on each end of a pole which he carried across his neck.

One of the pots had a crack in it, and while the other pot was perfect and always delivered a full portion of water at the end of the long walk from the stream to the master's house, the cracked pot arrived only half full.

After two years the cracked pot said to the water bearer: "I am ashamed of myself...this crack in my side causes water to leak out all the way back to your master's house. Because of my flaws, you don't get full value from your efforts," the pot said.

The water bearer felt sorry for the old cracked pot, and in his compassion he said, "As we return to the master's house, I want you to notice the beautiful flowers along the path."

Indeed, as they went up the hill, the old cracked pot took notice of the sun warming the beautiful wild flowers on the side of the path, and this cheered it some.

The bearer said to the pot, "Did you notice that there were flowers only on your side of your path, but not on the other pot's side? That's because I planted flower seeds on your side of the path, and every day while we walk back from the stream, you've watered them.

For two years I have been able to pick these beautiful flowers to decorate my master's table. Without you being just the way you are, he would not have this beauty to grace his house."

Moral : Each of us has our own unique flaws. We're all cracked pots. Some of us are old, some not so smart, some fat, some bald, some physically challenged, but it's the cracks and flaws we each have that make our lives together so very interesting and rewarding.

Source : From the Internet

Believe It or Not

If Earth's population was shrunk into a village of just 100 people with all the human ratios existing in the world still remaining, what would this tiny, diverse village look like? A Stanford University student came up with this : 57 would be Asian, 21 would be European, 14 would be from the western hemisphere, 8 would be African. 70 would be nonwhite, 30 would be white. 52 would be female, 48 would be male. 70 would be non-Christian, 30 would be Christian. 89 would be heterosexual, 11 would be homosexual...

If you live in a good home have plenty to eat and can read, you are a member of a very select group. And if you have a good house, food, can read and have a computer, you are among the very elite. If you woke up this morning with more health than illness... you are more fortunate than the million who will not survive this week. If you have never experienced the danger of battle, the loneliness of imprisonment, the agony of torture, or the pangs of starvation... you are ahead of 500 million people in the world. If you can attend a religion-related meeting without fear of harassment, arrest, torture, or death..you are fortunate; more than three billion people in the world can't. If you have food in the refrigerator, clothes on your back, a roof overhead and a place to sleep...you are richer than 75 percent of this world. If you have money in the bank, in your wallet, and spare change in a dish someplace...you are among the top 8 percent of the world's wealthy.

If you can read this message... you are more blessed than over two billion people in the world that cannot read at all. Have a good day, count your blessings, and pass this along to remind everyone else how blessed we all are.

Source : Message on Internet

Sense of Humour

Sense of humour seems to come from all-pervading joy, joy which has room to expand into a completely open situation because it is not involved with the battle between 'this' and 'that'. Joy develops into the panoramic situation of seeing or feeling the whole ground, the open ground. This open situation has no hint of limitation, of imposed solemnity. And if you do try to treat life as a 'serious business', if you try to impose solemnity upon life as though everything is a big deal, then it is funny.

There was this Tibetan monk who renounced his samsaric, confused life and decided to go live in a cave in order to meditate. Before this, he had been thinking continually of pain and suffering. He never smiled; he saw everything in life in terms of pain. He remained in retreat for several years, very solemn and deadly honest, until one day he looked at the shrine and saw that someone had presented a big lump of turquoise as a gift to him.

As he viewed the gift, he saw a mouse creep in and try to drag away the piece of turquoise. The mouse could not do it, so sent back to its hole and called another mouse. They both tried to drag away this big lump of turquoise but could not do it. So they squeaked together and called eight more mice who came and finally managed to drag the whole lump back into their hole.

For the first time the monk began to smile and laugh. And that was his first introduction to openness, a sudden flash of enlightenment.

- Chogyam Trungpa

India is Going to be a Rich Country

The old proverbial sources of comparative advantage (land, labour and capital) have given way to entrepreneurship and services. In both these spheres, India stand a good chance and has a good opportunity. "That is why I support globalisation now", says Mr. Bimal Jalan, Governor, Reserve Bank of India (RBI). Giving a glimpse of the opportunity before India, Jalan quoted a foreign economist who has forecasted that India will be the richest country in the world by 2038 and by 2040-45 the per capital income in India will be \$ 30,000.

Identifying "dichotomy between private and public sector" as the main challenge before the country, the RBI Governor pointed out the huge wastage of public resources. "Tolerance is too much in India", Jalan said in a reference to the Indian psyche of taking things lying down.

*- Bimal Jalan, Governor, RBI
Source: Indian Express, Dec. 17, 2000*

Lecture by H.H. Dalai Lama, Nobel Laureate at University of Roorkee

"My religion is simple. My religion is kindness"

H.H. Dalai Lama enlightened delegates at the International Conference on Buddhist Philosophy and Contemporary Issues on November 13, 2000 at the University of Roorkee, Roorkee, India. "Dalai Lama" means the Ocean of Wisdom. Excerpts from his lecture are presented here.

Human caring and sharing with others is compassion. Earning money and earning knowledge are not enough. Warm heart gives immense benefit. Compassion and tolerance is good not only for others, but one is also benefited. There is end of fears. Basic fact of life is death and aging. It is natural. We do not talk about death. It is an unavoidable problem. Money cannot help. Knowledge cannot help. Friends cannot help. Training of mind to face it is the solution.

Gap between the rich and the poor is creating unnecessary problems, conflicts and wars. If we develop right attitude, these problems will be solved to some extent. In materialistic life, we should believe in the values. Live with warm heart. This is secularism. Basic values are common in Hinduism, Jainism, Christianity, Islam and Buddhism. Basic values are - forgiveness, contentment, faith, self-respect, mutual respect, tolerance, non-violence, compassion, peace, love and benevolence. Basic human values have to be promoted. Closer relationship is very important. We have common responsibility. We should learn from each other.

Human emotions are the same as 2000 years ago. Buddha was highly emotional. Some emotions are constructive such as compassion. Emotions of fear, hate, greed, if last for long, eventually, destroy our health. Buddha analysed emotions internally and externally other's emotions of mind. Our main protector is Dharma and not Sangha. Negative emotions have to be reduced and positive emotions have to be increased. Inner contradictions have to be reduced. This will give peace of mind. Before statue of Buddha, meditate; you will get peace of mind and a happy mind. There are two types of emotions;

- Spontaneous emotions - grief, hatred, anger and attachment
- Positive emotions - compassion and altruism

Strong peaceful feelings come very slowly after months of meditation. Buddhist philosophy is self-analysis of emotions. Mental attitude becomes wide. When we realise reality, we should be closer to reality. Buddhism is science of mind.

We are interdependent according to Buddha. From materialistic point of view, Buddhism is Dharma also. Buddhism is genuine compassion for insects and humans. Jainism has compassion for all beings. Buddhist philosophy of interdependence is non-violence and no harm to others. This is essence of Buddha Dharma.

Today nations are interdependent. War means self-destruction. First reduce destructive emotions. Then reduce arms trade. Inner disarmament will lead to outer disarmament. Our goal should be complete demilitarisation step by step.

So long as suffering exists on earth, I will like to be reborn. That is my prayer.

- Editors, JRMTT

<i>PIONEERS</i>

This issue of the Journal is dedicated to the following pioneers who have been a constant source of inspiration.

Of all created comforts, God is the leader, you are the borrower, not the owner.
- Rutherford

Kind heart is for all, not for one religion.
- Dalai Lama

Seek and you will find.
- C.V. Raman

The art of teaching is the art of assisting discovery.
- M. V. Doren

Education is not to know what we don't know, but to civilise people.
- Tolstoy

The best teachers of humanity are the lives of great men.
- Fowler

The first step to knowledge is to know that we are ignorant.
- Cecil

The woods are lovely, dark and deep
But I have promises to keep,
And miles to go before I sleep,
And miles to go before I sleep.
- Robert Frost

Good humour is one of the best articles of dress one can wear in society.
- Thackeray

The end of labour is to gain leisure.
- Aristotle

Sincerity and truth are the basis of every virtue.
- Confucius

<i>BLISSFUL THOUGHTS</i>

Glorious indeed is the world of God around us; but more glorious, the world of God within us

- Longfellow

If you can give your son only one gift, let it be enthusiasm.

- Bruce Barton

Solitude is the audience chamber of God.

- L. E. Landon

Enmity is faded only by non-enmity. Otherwise enmity will propagate in future generations.

- Budha

He is richest who is content with the least, for content is the wealth of nature.

- Socrates

Nature's beauty is an art of God. Let us feel the touch of God's invisible hands, in everything beautiful, By the first touch of His hand rivers throb and ripple. When He smiles the sun shines, the moon glimmers, the stars twinkle, the flowers bloom, By the first rays of the rising sun, the universe is stirred; The shining gold is sprinkled on the smiling buds of rose; The fragrant air is filled with sweet melodies of singing birds, The dawn is the dream of God's creative fancy.

- Rig Veda 1.6.3

All the problems you face in life are because you attach over importance to events. The events grow bigger while you remain smaller....The mistakes you've made in the past have made you humble; you need not make mistakes in the future to become humble.

- Sri Ravi Shankar

If you shut your door to all errors truth will be shut out.

- Rabindranath Tagore

Intelligence is not to make no mistakes, But quickly to see how to make them good.

- Bertolt Brecht

It is impossible to find happiness outside for lasting happiness is within.

- P.K. Swamee