

Tectonic Strains in Himalaya

India is shrinking by 2 cm every year. A new analysis of satellite-based data has given precisely the rate at which the country is shedding size as it pushes northward against the Himalayas.

“India’s size is decreasing by 2 cm every year,” says geophysicist Paramesh Banerjee of the Dehradun-based Wadia Institute of Himalayan Geology. “As India’s size decreases, the thickness of the Himalayas will increase proportionately.” The analysis of data from 1998 onward reveals that the (100 km) distance between Mussoorie and Badrinath is now 1.5 cm less and decreasing every year. Bangalore and Lhasa in Tibet are also closer by 4 cm.

The results emerged after scientists at Dehradun and the University of California, Berkeley, studied the concealed movement of the Indian plate by measuring distances between 40 Global Positioning System (GPS) stations in India and across Tibet, Australia, Europe, the Middle East and Southeast Asia.

Source: Hindustan Times, Aug. 10, 2006

Delhi Metro Link Upto Airport

The Delhi metro has finally broken new ground. The New Delhi railway station-Airport Metro link got the government’s approval. The new high-speed route will take half the time between airport and Connaught Place (CP) compared to time required by road journey.

According to Delhi Metro Rail Corporation (DMRC) officials, the express link will have check-in facility at New Delhi and CP stations for air travellers. The maximum speed of the Metro will be 135 km/hr and it will take just 16 min. to reach the airport. The ridership is expected to be around 42,500 per day I 2011, of which 18,000 are expected to be air passengers. The cost after completion is estimated at Rs. 38,110 million.

The 19.5 km line will start from New Delhi Railway Station and pass through CP, Shanti Path, Moti Bagh and Rao Tula Ram Marg. It will have two intermediate stations at CP and Moti Bagh. Of the 19.5 km line, 9.7 km would be underground, 5.5 km elevated and 4.3 km would be at grade. There will be an extra 3.5 km stretch that will be within the airport premises and will have three stations.

Source: Hindustan Times, Oct. 7, 2006

Japan ‘makes’ Earthquake on a Table

Japanese researchers tested a huge quake simulator capable of jolting a six storey building in a project that could help improve earthquake-resistant construction methods.

The E-Defence simulator, with a 300-square-metre ‘shaking table’ powered by 24 pistons, can jolt buildings up to 12000 tonnes, according to the National Research Institute for Earth Science and Disaster Prevention, or NIED.

In Friday’s experiment, the mammoth device jolted a 16-metre, six-storey condominium at velocities similar to those in the 7.2-magnitude quake that hit the western city of Kobe in 1995. That quake caused widespread structural damage and killed over 6400 people.

Quake simulations involving life-sized structures help engineers assess structural damage in ways that aren’t possible with models, NIED said.

“We can see buildings are very vulnerable to an earthquake like the one in Kobe,” Toshimi Dabeyasawa, a professor at Tokyo University’s Earth Quake Research Institute, told reporters after the simulation.

Source: Times of India, Jan. 16, 2006

Nobel for Banker of Poor

Bangladeshi Microcredit pioneer Muhammad Yunus and his Grameen Bank were awarded the Nobel peace prize for their work in advancing economic and social opportunities for the poor. Yunus and the bank have helped millions lift themselves from crushing poverty.

In awarding them the prize, the Nobel Committee said their efforts showed how working to eliminate poverty can result in a lasting peace.

“Lasting peace cannot be achieved unless large population groups find ways in which to break out of poverty,” the committee said in its citation. “Microcredit is one such means. Development from below also serves to advance democracy and human rights.”

The 65-year-old economist, dubbed the “banker of the poor”, and the bank he founded in 1976 will share the prize, including the \$1.4-million (Rs. 6 crore) cheque.

Grameen Bank has been instrumental in helping millions of poor Bangladeshis, many of them women, improve their standard of living by letting them borrow small sums to start businesses. Loans go toward buying items such as cows to start a dairy, chickens

for an egg business, or mobile phones to start businesses where villagers who have no access to phones pay a small fee to make calls.

“I am so, so happy, it’s really a great news for the whole nation,” Yunus said when reached by telephone at his Dhaka home shortly after the prize was announced. Yunus said he would use his share of the award money to set up a company to make low-cost, high-nutrition food for the poor.

Yunus told Norwegian television. “This is the last prize. That’s what’s so special about it..... It’s the sky.”

Grameen Bank claims to have 6.6 million borrowers, 97 percent of whom are women, and provides services in more than 70,000 villages in Bangladesh.

Source: Hindusan Times, Oct. 14, 2006

India World No.1 in Gold Jewellery making

India has surpassed Italy and is now officially the largest gold jewellery producer in the world. Confirming the development, Federazione Nazionale Orati Gioiellieri Fabbrikanti Aderente a confindustria or Federorafafi, which is the federation of Italian jewellers said India has relegated Italy to second place in gold jewellery production.

Federorafafi said India surpassed Italy due to “competitive production costs, better access to global markets due to lower customs tariffs, good product quality and a huge internal market, “which they say is not accessible to Italian/European goods due to high tariffs and due to administrative barriers. According to data from the precious metal consultancy GFMS Ltd, India with gold jewellery production of 539 tonnes in 2005 was numero uno followed by Italy with 228 tonnes. Third spot went to china with 198 tonnes and Turkey was fourth with 197 tonnes. If scrap gold is included, India again emerged as No.1.

Federorafafi said Italy lost out due to high labour costs, absence of trade reciprocity from other countries, towards non organisation for Economic Co-operation and Development countries (India, China and South America amongst others), high rate of exchange of the euro compared to other currencies and difficulty in checking the distribution of goods.

Federorafafi said Indian jewellery designs have reached high standards and were recognizable the world over. Italian gold jewellery has a reputation of producing sophisticated designs and for many years floral designs of Indian jewellery did not attract too many international customers. But this is now slowly changing.

Source: Times of India, June 5, 2006

India's Forest Wealth Four Times its GDP

What is the value of our forests? For the first time, it has been estimated “conservatively” at Rs. 88,60,259 crore (1 crore = 10 million) as on 2003. And we are fast losing this asset. The decrease in stock of timber alone in just two years (2001-2003) makes for a wealth depletion of over Rs. 38,000 crore.

A unique study – Green Accounting for Indian States and Union Territories Project (GAISP)

Value of Forests, '03	Rs./crore
Timber / fuelwood*	59,65,367
NTFPs*	17,674
Eco-tourism	6,21,183
Bio-prospecting	14,06,190
Flagship species	52,40,318
Ecological services	9,78,357
Total	88,60,259
GDP in 2—2-03	20,52,586
GDP in 2004-05	23,93,671

*Only in dense forest area

NEED FOR GREEN ACCOUNTING IN GDP (in Rs./Ha)							
STATE	ALL FORESTS		DENSE FORESTS				Total
	Value of Timber and Fuelwood	Value of NTFPs	Value of Eco-tourism	Value of Bio-prospecting	Value of Flagship Species	Value of Ecological Services of Forests	
Andhra Pradesh	52,062	2,755	37,030	7,134	4,37,488	1,41,400	6,77,869
Arunachal Pradesh	55,039	218	148	5,816	4,37,488	1,47,182	6,45,891
Assam	37,506	1,286	5,297	38,411	25,08,080	1,55,086	27,45,666
Jammu & Kashmir	53,486	5,664	39,704	8,439	--	1,32,186	2,39,480
Kerala	39,895	4,986	3,77,657	83,116	4,37,488	1,59,041	11,02,183
Mizoram	68,058	1,016	471	10,963	4,37,488	1,47,044	65,496
India	1,52,830	4,528	91,640	2,07,448	7,73,077	1,44,332	13,73,854

Source: GIASP Study, Indian Express, Aug. 6, 2006

Earth-Shaking Developments

Are we any closer to predicting earth-quakes? Seismologists must be asking this question after Nature published the results of a study last week, by researchers in the University of Tokyo and Stanford University, that suggest that they may have found a way to map the epicentres of ‘silent earthquakes’. These tiny tremors deep inside Earth produce no tell-tale seismic waves. But over time, they build up enough pressure on the Earth’s crust to force it to twitch violently in a major quake. The researchers apparently discovered how these hushed tremors are linked to low-frequency earthquakes (which

last for over an hour and can be monitored). The scientists believe they can tell where silent quakes are building up pressure.

Although these findings are remarkable, predicting individual quakes is still not a realistic scientific goal. Far more research is needed before geoscientists learn what triggers low-frequency quakes, and corresponding silent quakes. Earthquakes occur when the assemblage of plates on Earth's surface grind against each other; causing 'faults' in the planet's crust. A patch of the crust sliding along a fault can slip suddenly to release energy waves that result in an earthquake. Even though a great deal is known about where the earth is likely to quake, there is still no way to predict when. A good bet may be to study the spatial patterns of the world's largest tremblers to forecast the locations and magnitudes of potential quakes, if not the time. For instance, strain builds up where Earth's crust deforms overtime. These deformations are good indicators of imminent quakes and can be detected by hi-tech radars on satellites.

That said, it might never be possible to predict the exact time a 'biggie' could strike, because when a fault becomes unstable, any small background tremor can hasten the rupture.

Source: Hindustan Times, July 31, 2006

The Importance of being Charitable

Conventional Wisdom in India has it that the West is all about conspicuous consumption and having joy in life. Perhaps it is, but it is also about giving. Some years ago, Ted Turner donated \$ 1 billion to the UN for its activities. In his typical style Mr. Turner reportedly said, "My hands shook when I wrote that cheque. I had just blown away the chance to become the richest man in the world." He summed up the heart-stopping dilemma of money-makers who decide to become money-givers. At the time, the irrepressible Mr. Turner also taunted Bill Gates for hanging on to his fortune. But Mr. Gates has taken up the gauntlet of competitive giving. He is to give up executive control of his corporation and look after the activities of the Bill and Melinda Gates Foundation, whose corpus stands at \$ 29.2 billion. Last week, his friend and the world's second richest man, Warren Buffett, decided that the time had come to start giving away money and he did it with a spectacular announcement that he would give away \$ 37.4 billion of his fortune, the largest-ever grant to charity by an individual. The bulk of this \$ 31 billion would go to the Gates foundation. As a perspective on these amounts – the UN's annual budget is \$ 12 billion.

Few can deny the life transforming role they have played in history. Andrew Carnegie's fortune helped create the great American public library system and Rockefeller Foundation funding helped provide mankind with our first unable antibiotics as well as hybrid seeds that led to what is called the Green Revolution.

The tradition of giving is part of almost every culture. Christians were once enjoined to give a tenth (tithe) of their income, Muslims are supposed to give away 2.5 percent as zakat. Indeed, all faiths stress the importance of charity and giving. India also has a tradition of corporate philanthropy, perhaps not so grand as that of the US. From being a largely religious institution, it evolved into a more secular and inclusive one from the 19th century when top corporates changed the face of Indian Charity with donations to orphanages and old-age homes, to contributions to larger causes like social equity and education. But what the Americans have taught the world is not just the art of giving, but the ability to run their foundations on industrial scale, with the efficiency of a modern corporation.

Source: Hindustan Times, July 1, 2006

Feat of Engineering

Huge termite mounds a few metres high break up the sparse southern landscape of the Kalahari. In some areas they form island towers of baked earth, where the rest of the desert's softer soil and sand has eroded during the rainy months. The termites' multi-chambered nests house several million members, and have air-conditioned towers and an elaborate system of interconnecting underground tunnels. In their highly structured societies, termites organize a division of labour with strictly defined duties. Foragers find food, construction workers help build and repair the nest, soldiers protect the colony from attack and nurses tend the young. At the heart of this empire lies the immense single queen, lying deep in the mound away from danger. She is so bloated with eggs she can scarcely move, while her much smaller king consort is always waiting in readiness to mate again. The queen spends her whole life increasing the termite population, laying up to 30,000 eggs a day.

Source: Reader's Digest, 2006

The Top 10 Countries with Nobel laureates

Founded by Alfred Nobel, the prize is awarded to people and organisations for outstanding contribution to society. These countries have produced the maximum winners:

1. United States	-	270
2. United Kingdom	-	101
3. Germany	-	76
4. France	-	49
5. Sweden	-	30
6. Switzerland	-	22
7. Netherlands	-	15
8. USSR	-	14
9. Italy	-	14
10. Denmark	-	13

Source: www.aneke.com

Science & Spirituality

I believe there is a genuine relation between modern science and internal spirituality. Our bodies are the platform for all pleasure and pain at the sensory level. At the same time, we have a sophisticated mind, which keeps track of things at the psychological level. Between these two, the experience of pain and pleasure on the mental level is superior. One could be physically ill but still be mentally happy and content. In fact, physical pain can be subdued by mental calm.

It is the basic right of all beings to achieve a happy, successful life. Today's material world is a product of science and technology – both of which bring comfort to humanity. Advancement in science and technology is helping people remedy their problems. Which is why we need to learn and be aware of both. But the question is : can science and technology eliminate worries and pain at the mental level? Unfortunately, modern machines can manufacture everything but a happy mind. And treatment on the physical level can't change your mental disposition.

I would say, while science gets us physical comforts, spirituality brings us mental calm. With the ever-growing impact of science on our lives, religion and spirituality have a greater role to play in reminding us of our humanity. There is no contradiction between the two. Each gives us valuable insights into the other. Both science and teachings of the Buddha tell us of the fundamental unity of all things. The potential antidote to your stress and anxiety lies in the mind itself. One must be warm-hearted and compassionate to avoid tension. Spirituality deals with the mine. By nature, compassion is the source of inner strength, calm and happiness. In fact, it is the extremely narrow-minded and self-centred person who is always worried about something or the other. If you place your worries within a larger perspective, you will realise just how trivial they are.

This is the 21st century – if there's major progress, there are also major problems. There is too much suspicion, distrust and too many unrealistic expectations people have from each other, which lead to more problems. In such a situation, awareness is important, warmth is important. It doesn't matter whether you believe in God or a next life, we need to create a balance between science and spirituality. If the two remain distant, we're headed for trouble.

On the other hand, only radical, materialistic thoughts point towards all matter and no mind. If we don't consider the importance of our inner feelings, we will become like machines and lose many precious feelings. We must keep our emotions – they bring colour to life. Training of the mind reduces negative emotions and promotes positive feelings. Which means we have the capacity to reduce negative emotions ourselves.

What is spirituality, anyway? Let me try and explain without making things too complicated. In ancient times communities remained isolated from each other – be it Indians, Chinese, Arabs – they all developed certain philosophies, thoughts and concepts that made them believe they were the best in every field. In today's global

world, realities have changed. We cannot afford to propagate our own beliefs or run down the other's faiths. That will only make things complicated.

There are two levels of spirituality – the first deals with basic human emotions. Even medical scientists have begun to realise and accept that the mental element – *karuna* – is very important for health, happiness and success. At another level, spirituality is your belief in religion. I believe the concept of God was created to increase love, compassion, tolerance and understanding for humanity. Ancient Indians thought of the theory of *karma* to strengthen basic human values. To believe or not to believe in these theories is totally the choice of the individual.

Once you find your reality through investigation and experimentation, you must accept it. If one finds a reality that is different from what is written in the scriptures, we should have the liberty to change them. I'm Buddhist. If I refuse to budge from my faith, I should believe the world is still flat. If I stay with religion and away from science, I will be living in an unreal world. There are two extremes in Buddhism – denigration and exaggeration. It is up to the individual to find the levels of reality between these two.

By invoking fundamental ethical principles, I am not advocating a fusion of religious ethics and scientific inquiry. Rather, I am speaking of what I call 'secular ethics' that embrace the key ethical principles, such as compassion, tolerance, a sense of caring, consideration of others, and the responsible use of knowledge and power – principles that transcend the barriers between religious believers and nonbelievers, and followers of various religions.

Source: Times of India, Dec. 10, 2006

HUMOUR

G O K

A patient went to a doctor. The doctor wrote on the top of the prescription, "disease – G.O.K." and recommended a few medicines. The patient asked him,

"Sir ! what is GOK" ?

He said, "You will come to know latter." Then the patient went to the chemist and asked for medicines. Finally he asked, "What is GOK"?

The chemist explained after some hesitation,

"Sir ! G.O.K. means God Only Knows"?