

***Fi*RE*Si*DE**

The House Magazine of the Thermax Group Volume 46 No. 3&4 July-December 2016





About the Cover

Jibhi, the Himachali village featured here, like many other hill destinations, presents the paradox of absence. City tourists are drawn to its misty hills that appear only in their dreams. In those pine and cedar forests as they lose themselves in treks or fishing expeditions, they realise what they miss as seasons and years fade away.

Meanwhile, the idyllic villages tucked away in dreamy mountain folds often wait for the basics of life – roads, healthcare, schools. In search of a better life, people from the hills migrate to the cities, where the heat, fumes and frenzied lives will remind them of the absent riches they had always lived with.

(Image by Sameer Karmarkar)

BACK COVER

Snapshot: Thermax's upcoming project for Reliance Industries at Hazira

Comment

**The man who does not read
has no advantage over the man
who cannot read.**

– Mark Twain

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• Appearances can indeed be deceptive, especially when bankrupts present themselves on social media • and a cartoon on the dilemma of studying the past.

What's New?

Upgraded systems
will meet new emission
norms of 50 mg/nm^3

Retrofit of NTPC's air pollution control equipment



Thermax teamed up with Hitachi Japan to renovate and retrofit two 500 MW Electrostatic Precipitators (ESPs) at NTPC, Rihand (UP) reducing particulate emission to below 50 mg/nm^3 .

The ESPs of 1988 vintage support 1000 MW power of the plant's total capacity of 3000 MW. Originally designed for particulate emission of 100 mg/nm^3 , emission levels have gone up over the years because of changes in coal characteristics and deterioration

of equipment. 50 mg/nm^3 is now the revised emission norm.

This project is Thermax's first at installing and commissioning Hitachi's patented moving electrode plate (MEEP) design. Unlike standard systems, these ESPs with compact moving electrodes dislodge captured dust by continuously moving collecting plates and brushes, improving efficiency.

Thermax's Air Pollution Control (Enviro) division converted the

Japanese specifications to suit Indian standards. The team also developed and manufactured internal components of the ESP, and commissioned the project under the supervision of Hitachi in September 2016.

In an earlier issue, *Fireside* had covered the news about the Thermax team clocking one million safe man hours while working on this project.

The new design addresses the two big concerns of industrial users – unwieldy size and frequent cleaning

Enerbloc

-next generation thermic fluid heater

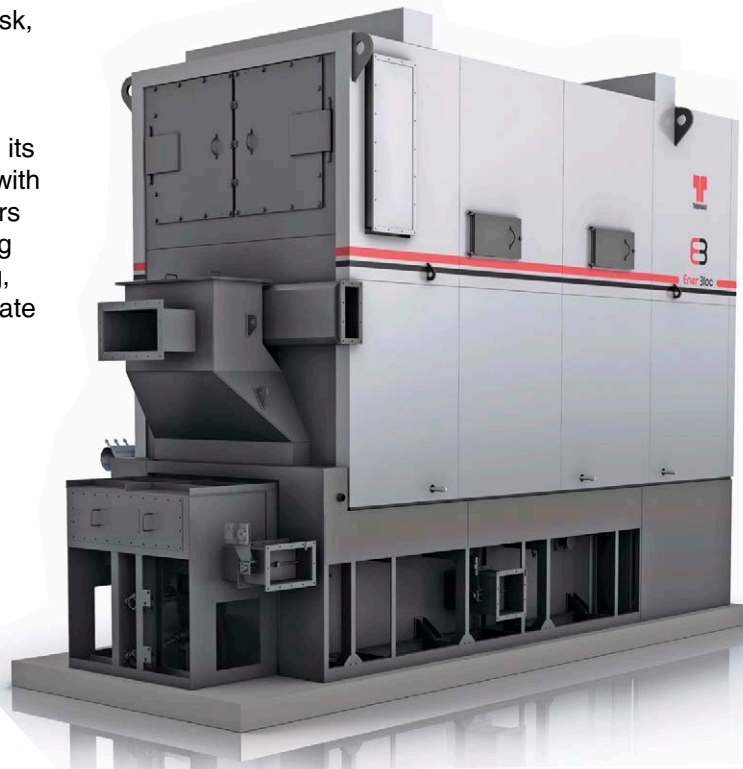
Thermax recently launched Enerbloc, the new generation thermic fluid heater to keep pace with changing industry expectations. Compactly designed, the new system incorporates advanced technology, ease of maintenance, fuel flexibility and safety features.

The new design takes care the two big concerns of industrial users – unwieldy size and frequent cleaning. Enerbloc, by a reduction of 25% in footprint and 50% in height compared to traditional systems, takes up less space. Automated ash removal helps in ease of maintenance.

Available in the range of 1.5 to 3 MKcal / hour and 280 to 300 °C temperatures, Enerbloc offers the flexibility to choose from biomass briquettes and pellets, rice husk, Indian or imported coal.

Back in the '70s, Thermax pioneered the concept of thermic fluid heating in India with its unique Thermopac, which became popular with several industrial applications. Enerbloc offers the new industrial client, a remote monitoring and control system with diagnostic reporting, troubleshooting, combustion control to regulate fuel feed and SMS safety alerts.

*Enerbloc :
A worthy successor
to Thermax's
iconic product,
Thermopac*



Thermax uses rice husk as fuel to generate 20 MW power at this Independent Power Plant

Biomass based power plants commissioned in the Philippines

Thermax has built and successfully commissioned several biomass based power projects in the Philippines in the last decade.

Most recently, at Isabela Biomass Energy Corporation (IBEC), Thermax used rice husk as fuel to generate 20 MW of power. At this independent power plant (IPP), generating electricity for utilities and end users, besides the boiler, the scope of supply included air pollution control equipment and a water treatment plant. Thermax has also bagged a two

year operation and maintenance contract of the plant, whose average capacity utilisation or plant load factor is at 95%.

The project was honoured at the IFC Sustainable Energy Finance Awards for being energy efficient, sustainable and having the potential to be replicated.

In September 2016, at Biomass Energy Corporation, Thermax Power commissioned a 5MW IPP which uses rice husk, corn cobs, coconut shell, and corn stalk as fuel.



Thermax's O&M team at Isabela Biomass Energy Corporation, and inset, the IBEC team at the IFC award ceremony

This high temperature solution which can be stored will help in substituting fossil fuels

Thermax and Frenell to execute Asia's first integrated solar thermal power plant at NTPC

In a technological collaboration with Frenell, a German concentrated solar power company, Thermax will execute an integrated solar thermal power plant at NTPC Dadri in Uttar Pradesh. This project, qualified as Asia's first, involves integrating a concentrated solar field with Dadri's coal fired power station. The contract with NTPC was signed in October 2016.

The solar field consists of mirrors which concentrates the sun's heat onto receiver tubes which generate hot water or steam for the required application. The field will feed 14.6 gigawatt heat annually into the water and steam cycle of a 210 MW unit at the power station. The integration will lower fuel consumption and

thereby reduce the emission of greenhouse gases. Combined with thermal storage, such projects could harvest solar energy for round-the-clock utilisation.

"This project will help power generating companies to improve the efficiency of their coal fired power stations. This solution also will contribute to the national target of at least 3% solar share of total power generation by 2022," says M.S. Unnikrishnan, MD and CEO of Thermax.

Sharing Thermax's view of significant market potential for CSP solutions in India, Martin Selig, CEO of Frenell explains, "We are very proud of delivering our well proven CSP technology to this flagship project. Our high

temperature solution, which can also be stored will help in substituting fossil fuels in existing and new thermal power stations in sunnier seasons."

As the turnkey EPC contractor to NTPC, Thermax will be responsible for design, engineering, procurement and supply of the entire solar thermal plant, balance- of- plant equipment and seamless integration of the solar field. Thermax will rely on Frenell's proprietary technology based on the Fresnel collector principle for the turnkey manufacturing and construction of the solar field. Frenell will provide the technology services through its wholly owned subsidiary Novatec Solar Espana, S.L.



Thermax's C.V. Ramanan and Kirtiraj Jilkar with N.M. Gupta, General Manager of NTPC-NETRA, after signing and exchanging the contract agreement



A demonstration plant for solar integration in a coal fired power plant that Frenell installed at New South Wales, Australia

Expressions

“I am glad we could all dance together that evening. The exuberance, energy and togetherness made it all very special.”

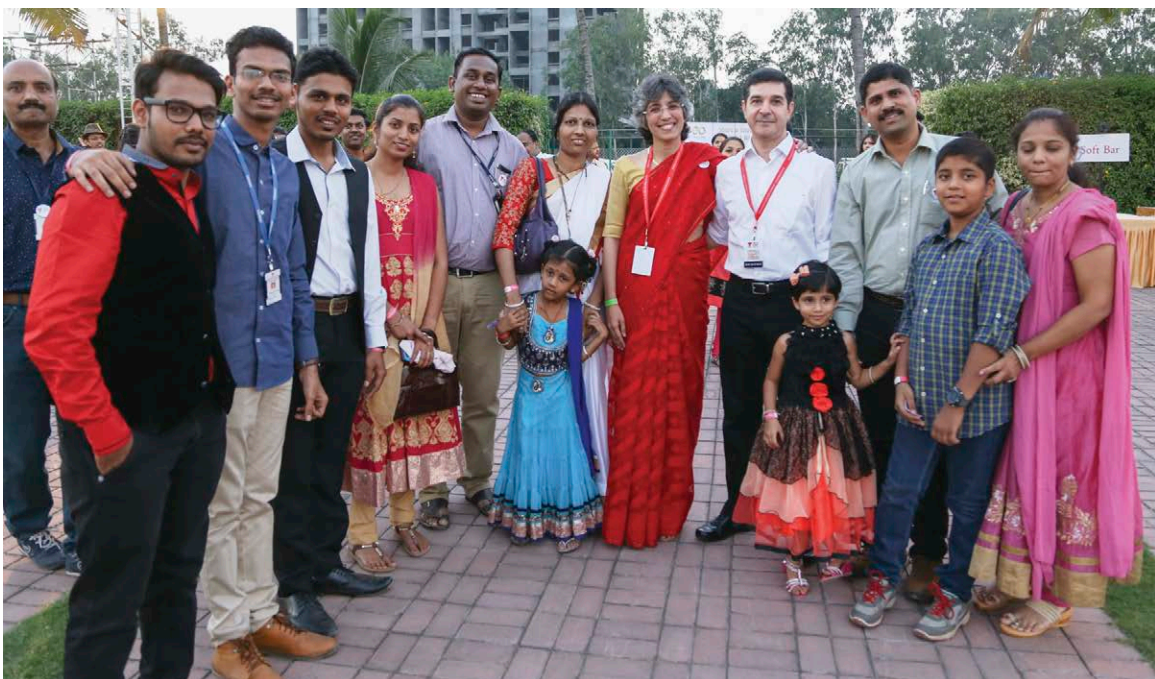
It isn't often that one gets to celebrate the Golden Jubilee of a company in one's lifetime. I feel so privileged, proud and honoured to be part of an organisation that has completed 50 vibrant years.

The celebration on the evening of 12th November, 2016 was magical; greeting our employees, their spouses and children as they walked through the gates of Laxmi Lawns in Pune – each one excited, wanting to introduce their families, take photographs and glance through the panels which presented pictures down memory lane.

We enjoyed watching the talent and confidence of our children as they sang, danced or just answered questions by the compere. It felt good to see the bonhomie, togetherness, pride and happiness on every face.

We were very happy to see many of our former Directors grace the occasion and meet up with their old colleagues and friends. Valentin, our current independent director, was very kind and gracious to have stayed behind, just to attend the function.

As I participated in our celebration, I thought of my grandfather, who laid the





foundation of this enterprise and my father who besides envisioning and nurturing the organisation, also touched many lives over the years with his intellect, entrepreneurial drive, kindness and a strong set of values. I also stood humbled and indebted to the many people who built this organisation, brick by brick, layer by layer, with tremendous love, a sense of passion and purpose, truly believing that this company was their very own – that's what makes Thermax unique and special.

We thank and would have loved to have our former employees, customers, channel associates, vendor partners, auditors and bankers join us for the celebration. Unfortunately, it would have been very difficult to draw the line and accommodate so many. We do know that some of our former employees were disappointed, and I apologise for that. The very fact that they expected to be invited means that they have affection and a sense of belonging to Thermax. We feel a deep sense of gratitude to all of them.

Everyone loved the beautiful kathak jazz dance by our children from Akanksha schools. Their bright smiles, cheerful

faces, graceful movements and excitement on stage were a treat for all of us. Then came the lights, camera and action on stage - 76 dancers, who looked fabulous, danced with great vigour and had a wonderful time on stage. No one would have imagined that they were our very own employees (in fact a few of our Directors asked whether they were professional dancers) – across hierarchy, divisions and locations – truly depicting ONE Thermax in those great dance sequences, bright colours and a lot of fun! They had put in a lot of hard work over six weeks and we thank each of them.

And of course the last dance was a special finale with the EC and our family on stage, dancing to a song from the film *Dil Dhadakne Do*. To me, this and the dancing and cheering that followed all evening was a true depiction of our values strongly held within the company. Though a multidivisional company, we are constantly trying to break silos that separate people, and encourage an open culture and a way of organisational life that reaches out to include everyone. I am glad we could all dance together that evening. The exuberance, energy and togetherness made it all very special. It was a joyous tribute to

our company that has flourished by harnessing the synergies of committed teams.

I am aware of the dedication, hard work and long hours our people put in to make this event a resounding success. On behalf of all of us at Thermax, my heartfelt thanks to each of you. I thoroughly enjoyed our practice sessions, followed by our tea and, on a couple of occasions, a snack brought in by Natasha. Towards the end of the sessions, it gave me an opportunity to meet with members of the EC three times a week to bond and just have fun, more than I've ever met them for work.

I'd like to take this opportunity to thank all of you once again for making this a very special evening to remember. We are happy the celebrations at the regional and area offices brought excitement and a sense of togetherness to all our people. As my father always maintained "the best is yet to come".

With immense gratitude,

Meher Pudumjee

Up close

"If it had been your company, would you have done that?"

A concern for authenticity. A feel for genuineness. Respect for life beyond work hours. Leaders who were also mentors. Glimpses of an unconventional company life emerge as former employees share their memories with *Fireside*

On the occasion of Thermax's Golden Jubilee celebrations, we got in touch with some of our former employees to reminisce about the company.

Several of them speak of the down-to-earth nature of the company, the genuineness of its people. They remember organisational daily life without ostentation, or the swagger of self-importance. BMK Sethi who worked for 44 years with Thermax and retired as the CEO of Thermax Engineering Construction Company remembers his first trip to Pune, soon after he joined the Delhi office. "As was the practice,

at the canteen we had the privilege of eating lunch with the top management team. The very first day of my arrival, Mr. Bhathena picked up his plate and joined me at my table. It was December, and travelling from Delhi, I was wearing a full

suit. He looked at my suit, held my tie and told me 'Young man, in this company we value your work and not how you dress.' "

Dhaval Shirole, who worked for over 18 years in Thermax till 2004 [now with Aquatech as Vice President (HR & Admn.), Eastern] spoke of the day when he and other graduate trainees had a new speaker named Abhay Nalawade (Thermax's MD from 1996 to 2000). "A mild man with unassuming looks, we thought this was some lightweight manager. There were even amused looks exchanged." But, Dhaval remembers, when he started to talk, it was as if another person had emerged. "He held us spell bound with his knowledge, practical wisdom and overall understanding of the business situation. It was a lesson for life – not to be taken in by slick surfaces, by appearances."

B.D. Das remembers his days as a trainee on the test bay where all units were test fired, then painted and despatched. Bhathena asked the trainees if they knew how to paint the equipment. They hadn't even thought about it. He explained to them that what's delivered should be a well-conceived engineering equipment, and it should look like an international product. "We learnt how to prepare a product for painting by sand papering and adding putty. It was a lot of hard work compared to just test firing the unit. But it taught us how to be hands-on with any job that we do and that there is no menial work". Das says Bhathena



B D Das : Mr. Bhathena taught us to be hands-on with any job we do and that there is nothing called menial work.

helped trainees understand that “the ethos of the company is to do what’s right and have the courage to say and do what needs to be improved.”

For people who worked with them, Rohinton Aga and A.S. Bhathena were leaders who left the stamp of their personalities on Thermax. Ishrat Mirza, who retired as Vice President (Legal & Taxation) after 33 years of service says both Bhathena and Aga were great

communicators who could inspire. “Mr. Bhathena was a true entrepreneur with a gut feel of business requirements and his business philosophy was tempered by a concern for social welfare. How well some of us remember

him fretting about *tanki mein paani nathi* and he would draw a water tank on his pad, his way of reminding us that cash inflow and outflow should match.” At the same time, he belonged to a generation which felt that companies also existed to provide employment and take care of employee welfare. “He never lost an opportunity to remind everyone that when a company employs a person it is in fact supporting an entire family.”

Dhaval remembers a time when he and others working for a Thermax group company had to move from the city office to be at a JV partner’s premises at Chinchwad.

They were upset about the prospect of the long commute and being displaced from their familiar offices. Aga spent 3 ½ hours with them, explaining the reason for the shift, how the organisation could mitigate the inconvenience of their travel time (breakfast, newspapers, etc.). “As CMD, he could have instructed any employee to shift. But for him, it was important that the rationale of the move be conveyed and ensure our buy-in for the decision.” Dhaval says he always remembers Mr. Aga twirling his gold Cross pen and softly asking while confronting someone, “If it had been your company, would you have done that?”

Sethi remembers the time he was chosen as a member of a team of performers to visit the Hanover Fair in Germany. Six hours before his flight was to take off, as he waited at the transit house in Bombay’s Marine Drive, he got a call from Raghuram in Aga’s office. Sethi had been called back to Pune and he was to meet Aga the next morning. He was nervous and was expecting the worst. However, he is told by Aga that the manager handling Thermax’s project for SPIC (a 120 TPH boiler against 50 TPH, the biggest Thermax had done so far) had quit, and he has to take over immediately. SPIC went on to be one of the key projects that positioned Thermax in the space of larger capacity boilers. “Mr. Aga had a way of entrusting people with responsibility, with the faith that they would handle it with care,” says Sethi.

Mirza has an insightful observation on Aga’s way of inspiring people:



Dhaval Shirole : It was a lesson for life – not to be taken in by slick surfaces, by appearances.

You take a piece of music to him. He will appreciate your melody, then come up with a few suggestions which could “possibly be tried out.” You play the new variation, and are delighted it sounds wonderful. Even when he was the force behind the music that’s finally played, Mr. Aga had that unique knack of making you feel it is your music.

Ishrat remembers the indomitable will and patience of Anu when she nursed Aga after his stroke in the 1980s. “Even the basics were lost from his memory, and he couldn’t write even a sentence. Anu had to literally write out $2+2=4$ on a slate. She brought him back to life.” Das says Anu was always a sport. He remembers the wonderful

parties at Thermax’s favourite haunt, Fariyas at Lonavala. “The openness, the fun, the tongue-in-cheek comments, and the dancing was just so much fun, especially with Anu pulling everyone on to the floor...”

Kiran Gandhi worked with Thermax from 1986 to 2000, handling

Organisation Development and Training, and eventually heading the company’s HR function. Kiran’s job, using his experience from Tata Motors, was to develop a collaborative culture in Thermax, compartmentalised in multidivisional silos. He remembers the excellent support from



BMK Sethi : Rohinton Aga had a way of entrusting people with responsibility, and the faith they would handle it with care.

P.M. Kumar and Anu, his colleagues in the HR Department. “We were a close-knit team working with the divisions. We could achieve exciting turn-arounds and the honour of being selected the best HR company by the HRD Network.” One thing that Kiran found remarkable about Thermax was “the willingness to face issues and an openness to ideas for change. We were not afraid of experimenting.”

Das also sees this approach to try out new ways and adapt good practices from elsewhere as one of the hallmarks of Thermax. And it also helped that there were “bosses like Abhay who gave one the authority and helped to deliver what was required,” he points out. A programme on franchising conducted by McDonald’s inspired them to look at the challenge of meeting diverse customer needs arising from the growing number of products in the field. At that time, franchising services had not been tried out by any industrial company in India. After two days of brainstorming on standardising processes at Abhay’s brother’s vacant house in Bombay, “we created the first service franchisee model which was the basic operating process of the successful



Ishrat Mirza : Even when he was the force behind the music that you played, Mr. Aga had the knack of making you feel it is your music.

Thermax Service Franchisee (TSF) scheme.”

Sethi talks of Thermax’s transition from a product to a project-based company. “Our first tie up with Babcock and Wilcox (TBW) gave us an opportunity to learn their project management systems and practices. I feel proud that Project Cost Review System developed then is being used even today.” He remembers the formation of the Project Management Group and developing other practices that helped establish Thermax as a reliable partner in conceptualising and executing complex projects.

Das describes “the first customer focused initiative that Mr. Aga personally rolled out -DART (Divisional Apex Review Team)”, a diligently monitored process for tracking and resolving customer complaints. “I am of the firm belief that if

Thermax today has a ‘customer oriented image’, it is because of Mr. Aga,” he says.

Thermax encourages its employees to work for causes that are close to their hearts. Kiran Gandhi and his family were involved with the Moral Rearmament Centre in Panchgani. There was difficult phase at the centre with acute shortage of volunteers. Kiran wanted to offer his services as a volunteer, which was not paid. He applied for a one year sabbatical on leave- without-pay. “Anu was heading HR and I was in charge of OD and training. It was not difficult for me to convince them about MRA work. But Anu’s

question was, ‘How are you going to support yourself?’ I could only say that a friend had agreed to finance my daughters’ school fees for a year. After discussing with Mr. Aga, Anu told me that I was allowed one year’s paid leave with only one condition – that every month, I would come for a day to the Pune office.”

Kiran points out something exceptional about Thermax: its capacity to welcome and include people who are entirely different from one another in a team. “I have worked with several companies in my career before and after Thermax. But never have I come across such a heterogeneous culture as that existed in Thermax.”

Das, who used to be Thermax’s Service Chief, fondly remembers inspiring bosses like Ramani who “seemed so deeply immersed in whatever he did, and brought so much joy into doing whatever had to be done.” Dhaval, who worked with Unny as part of his HR team during the turnaround phase says it was highly instructive to “watch him take decisions based on logic and what was best for the company, all the while keeping in mind the human angle.”

It has been over a decade after Dhaval left Thermax. But you can feel his affection for the company where he began his career when he says, “I can only remember Thermax as a one-of-a-kind organisation and thank God I had the opportunity to work there.”

*{Conveyed to A.M.Roshan
through conversations
and emails}*



Kiran Gandhi : Though I have worked with several companies, never have I come across such a heterogeneous culture as that existed in Thermax.

Focus





The Golden Jubilee celebration in Pune on 12th November 2016 was a dazzling success thanks to the enthusiastic participation of our employees and their families, current and former directors and special invitees.

The guests of the evening were welcomed by Anu, Meher, Pheroze and Unny at the entrance to the Laxmi Lawns venue. The panels depicting Thermax's legacy offered the ideal backdrop for selfies and photographs.

The evening began with the ceremonial lighting of the lamp, speeches, felicitation of Anu, and a sand art depicting Thermax's journey over five decades. Akanksha students regaled the audience with their performance but the loudest applause was reserved for the 76 employees who put up spectacular Bollywood dance sequences. The surprise finale by the Executive Council members and promoters was received with cheers and whistles from the 5000 strong crowd. They wanted an encore, which the performers gladly agreed to.

With their high octane performance, Sandeep Vyas and his band brought the crowd to its feet from the word go. The music and dancing continued even as dinner was served and some stayed back to dance right until the party ended.

The event was a celebration of *One Thermax* that cut across locations, hierarchy, and divisions. It was a memorable evening that will linger for years to come.

Celebrating life at Thermax: *Glimpses from the Regions*

Thermax's regional offices joyously celebrated the 50 year anniversary. Employees and their families came together at Mumbai, Ahmedabad, Bangalore, Hyderabad, Kolkata, Lucknow, Delhi and Chandigarh to remember, share and salute life at Thermax.

The participants showcased their talent through songs, skits, mimicry, dances and stand-up comedy.

Thermax's Channel Associates who were specially invited even took part in impromptu singing.

The dance floor beckoned and a sumptuous dinner wrapped up the event at each location. In the flurry of post party selfies, messages and photographs, everyone agrees that it was a get-together to savour for a long time to come.

Ahmedabad



Ahmedabad



Bengaluru



Chandigarh



Delhi



Hyderabad



Delhi



Kolkatta



Kolkatta



Mumbai



Mumbai



Lucknow

Round up

Prefabricated MBR based sewage treatment plant for an automobile major



Higher quality treated water and lower energy costs at the Chennai automobile facility

When an automobile major in South India approached Thermax for a 250 KLD sewage treatment plant, they specified quick delivery, minimal site work and reuse of the treated sewage. Thermax had a ready solution in its advanced wastewater treatment technology—the prefabricated Membrane Bioreactor (MBR) plant

MBR combines an ultra-filtration membrane process with a suspended growth bioreactor to offer the customer many advantages – higher quality of treated water, lower energy cost, compact and easier operation, simple operator interface and a flexible design that occupies a smaller footprint – 60% space of a conventional sludge processing plant.

The client, a manufacturer of premium cars and commercial



Inside view of the plant

vehicles uses the treated sewage for horticulture, cleaning, flushing and for plant utilities after water softening.

The prefabricated MBR treatment plant is also suitable for housing societies, manufacturing and processing plants, schools/ universities, hospitals, hotels and resorts.

Thermax boiler for Dominican Republic : Energy from sugarcane waste

The President of the Dominican Republic inaugurated San Pedro Bio-Energy's 30MW cogeneration plant, the first one connected to the country's national grid. The 140 TPH boiler for the plant was supplied by Thermax's Boiler & Heater division.

The travelling grate (TG) boiler is

designed to use bagasse waste of sugarcane, along with coal and king grass. Thermax received the order from EYRA, a subsidiary of Spain's Cobra group which constructed the cogen plant.

This is the first TG boiler order for Thermax in the Dominican Republic.



The 140 TPH travelling grate boiler generates 30 MW power



Green energy without capital investments: biomass boilers that supply steam on a per unit basis

From TOESL: Steady steam and a bonus of reduced emissions

Thermax Onsite Energy Solutions Ltd. (TOESL) recently began the supply of steam to a chemical manufacturer and supplier to leading perfume brands. At the client's factory in Kurkumbh, Maharashtra, TOESL commissioned two packaged biomass boilers (Combloc) which use Lambion technology. It also supplied a fully automated bed ash removal and fuel handling system.

By replacing the customer's furnace oil fired boilers, TOESL has unlocked a potential to annually reduce almost 15,000 MT carbon dioxide emissions, in addition to energy costs in the long term.

TOESL is a Thermax subsidiary committed to the supply of green energy through renewable fuel like biomass. Customers outsource utilities to TOESL while only paying for utilities on per unit basis, without the bother of capital investment, uncertainties related to biomass/ green fuel supply, and operation and maintenance of the plant.

Thermax equipment for Saudi Arabian Projects : Floor mounted boiler and chillers

Boiler for a refinery assembled at Mundra facility

As part of its supply to an upcoming Saudi ammonia plant project, Thermax's B&H team has assembled a 150 TPH FM (floor mounted) boiler at its Mundra facility. The assembly of the natural gas fired bi-drum boiler is among the several that Thermax has carried out at Mundra for projects in the Middle East.

The ammonia plant is part of a fully integrated phosphate production complex that Ma'aden, a Saudi Arabian mining company is constructing.



The 150 TPH boiler lifted for onward trip to project site in the Middle East (and below) Saudi Kayan refinery uses Thermax chillers for process cooling



Chillers for a Petrochemical company

Thermax cooling has bagged an order for four hot water chillers of 1665 TR each from Saudi Kayan Petrochemical Company, an affiliate

of SABIC. The chillers will be used for process cooling at the ethylene oxide and ethylene glycol plant.

The order came through the Wison Group, a Chinese EPC contractor. The equipment will be delivered to

meet stringent ASME and safety regulations.

The Saudi Kayan petrochemical complex is one of the largest in the world. For over a decade Thermax has supplied chillers to several affiliate companies of SABIC such as Yanpet and Sharq.



Anu Aga honoured with Frost & Sullivan award

Anu Aga received the Leadership award from Frost & Sullivan at its Growth, Innovation and Leadership Summit in Mumbai. The award cited her contribution to the social sector, commitment towards philanthropy and for bringing in strategic transformation at Thermax.

Thermax reaches out to the distillery sector

At a gathering of consultants and OEMs from sugar and distillery industries, Thermax presented various aspects of integrated distillery and ethanol projects. The session was organised by Mitcon Consultancy at Chennai to discuss the issues, trends and technology updates.

Mutharasun Sundaram and Santosh Guttenavar from B&H Marketing highlighted the advantages of the company's boilers burning the polluting distillery waste, spentwash; and also about additional benefits including captive power generation, process steam and high potash content

ash (commercially used as biofertiliser).

A similar interaction took place at another seminar organised by Uttar Pradesh Distillers Association. The event focused on upcoming technologies for ethanol modernisation, effluent treatment solutions.



Perspectives on integrated distillery and ethanol projects in Chennai

Thermax wins CII award for its energy saving chiller

Thermax won the 'most innovative energy saving product' award at the 17th National awards organised by the Confederation of Indian Industry (CII) at Hyderabad. The event which recognises significant contributions to energy efficiency, chose Thermax's ultra-low pressure vapour

driven chiller for the award.

The prize winning chiller helps in reducing carbon emissions and helps clients to save on water use. It is ideal for food processing, chemical and petrochemical industries.



Meher Pudumjee and the Cooling business team receiving the Award

Thermax Foundation kickstarts Aakar project for Aanganwadis

The Aakar Project for which Thermax Foundation signed a three-year partnership with the Ministry of Women and Child Development, got under way with an orientation programme in September.

The collaborative project is aimed to implement Aakar, a state level curriculum developed to strengthen non-formal education in aanganwadis, by empowering a cadre of Integrated Child Development Services (ICDS) supervisors.

The four-day orientation training focused on developing a larger understanding of early childhood education and its importance in the context of Aakar Pune Project. A panel of Child Development Project Officers from ICDS Pune division, Anu and Meher interacted with supervisors. The curriculum is expected to impact more than 50000 children from over 1400 aanganwadis in Pune.



Thermax Foundation team with Aaganwadi volunteers

Open Forum continues the dialogue

As has been happening for the past 20 years, employees and senior management came together at the Open Forum for their annual dialogue and to discuss the future course of the company.

This Golden Jubilee year, employees raised stimulating questions, and voiced their concerns. The 90 minute question-answer session provided enough sparks of wit and wisdom. A mime on the overuse of cellphones staged by Akanksha students was entertaining and thought provoking.



*A time to ask, listen
and express*



*Akanksha on
our life with
cellphones*



Thermax at Exhibitions



India International Seafood show

Thermax's stall at the 20th edition of the India International Seafood show in Visakhapatnam had a good number of visitors. The three-day event billed as the largest sea food fair in Asia had participants from over 30 countries. "On display were several of our process cooling solutions," says Farhan, from Cooling Marketing.

*Cooling solutions
at the largest
seafood fair in Asia*

Green Building Congress

Thermax showcased its green, sustainable solutions in heating, cooling and water management in the 14th edition of Green Building Congress 2016 in Mumbai. From energy efficient heating and cooling to water recycling, these systems are already installed in several green buildings.

*Energy and water
efficient solutions for
buildings*



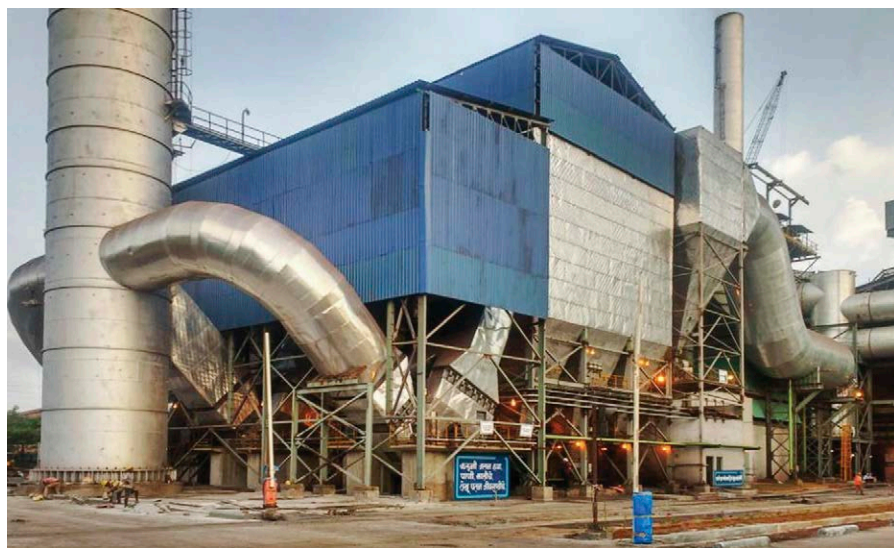
Thermax China organises sports day

At the summer sports meet organised by Thermax China, everyone had an invigorating time. The fun-filled event had participation from all the employees. They took part in football, table tennis, badminton and sprints.

The non-playing participants cheered and supported their colleagues. The day added to the sense of camaraderie and team-spirit they share at the workplace.



Camaraderie and team spirit at the summer sports event : Thermax China



Dedusting equipment at JSW's facility

Thermax Enviro has commissioned air pollution control equipment at JSW Dolvi's cast house and stock house in Raigad district, Maharashtra.

The scope of the work included among others, supply of an offline

pulsejet bag filter, pneumatic dust conveying system and storage silo with accessories, electronic operation and control; ducting along with supports and expansion joints.

Enviro team completed the fabrication at site. The gas volume

Thermax commissions bag filter for emission control at JSW

handled by the bag filter is 16,00,000 AM³/ hour with a total tonnage of 1400. The project was completed in June and performance guarantee test will be conducted in early 2017.

Limelight



Kavishwar

Kavishwar receives Chartered Engineer certification

Kavishwar Kalambe from Chemical division has received Chartered Engineer Certification from The Institute of Engineers, India.

A Chemical Engineer with MBA in finance, Kavishwar joined Thermax in April 2015.

He reads spiritual books and enjoys working out in his free time.



Sourav completes Executive MBA

Sourav Batabyal from Services (C&H) has completed Executive MBA from Symbiosis International University. Joining Thermax in 2012, Sourav was initially posted at Pune. Currently based in Kolkata, he handles eastern region sales for the business group.

Sourav likes to travel in his free time.



Sourav



Anish completes full marathon

Anish Hadawale completed the 42 km full run at the Pune Running Beyond Myself Marathon in October 2016. Practising for the last seven years, Anish has been participating in some of the running events. In this first attempt at full marathon, he completed his run in 4.35 hours.

Anish joined Thermax in 2004 and works with the B&H division. A father of two, he loves to read and listen to music in his leisure time.



Anish

Akhilesh's suggestion implemented by the central government

Indian Railways has accepted and implemented a suggestion from Akhilesh Bajpai. Through the Government's MYGov app, his suggestion was to implement online railway reservation facility for handicapped people, instead of having to visit the passenger reservation system (PRS) counter to book tickets and avail concessions.

Akhilesh was invited to attend a Town hall Programme at Delhi's Indira Gandhi Indoor Stadium on the 2nd anniversary of MYGov. He was part of a group chosen to meet and be congratulated by the Prime Minister, Narendra Modi.

Akhilesh joined Thermax in 2010 and works with the C&H SSBU division at Delhi. He likes travelling and reading.



Akhilesh



Tushar and Aryajith shine in Abacus competitions

In the of Abacus competitions held recently in Solapur, Aryajith Palakkal won the first prize for the 6th level. A 7th standard student of Priyadarshani English Medium School, Bhosari, Aryajith likes drawing, reading and yoga. He is the son of Jincy and Benoy Palakkal from WWS division.

In the same event, 13- year old Tushar Jadhav won the top prize for 4th level. Tushar, also in 7th Standard, studies at Camp Education Society, Nigdi and likes playing cricket and reading stories. He is the son of Rekha and Bhimrao Jadhav from C&H division.



Tushar



Aryajith



Shriniwas does it again

Over the last three years, Shriniwas has been one of the top performers from his school participating in the National Science Olympiad. He stood second this year, among the students from his school.

A 7th standard student at Saraswati Vishwa Vidyalaya School (Nigdi), Shriniwas likes to play cricket and watch science based programmes. He is the son of Sucheta and Vaibhav Kulkarni from B&H division.



Shriniwas

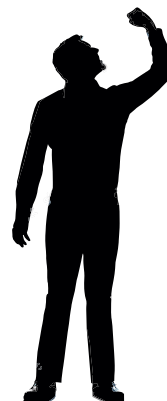
Signposts

Are we living in a post-idea world, where thinking is not cool anymore? As social networks feed our insatiable hunger for information, are we inundated with so much of it that we can't, we even don't want to process it? Neal Gabler, author and senior fellow at the University of Southern California, contrasts our age with an earlier one that celebrated Big Ideas.

THE July/August issue of *The Atlantic* trumpets the "14 Biggest Ideas of the Year." Take a deep breath. The ideas include "The Players Own the Game" (No. 12), "Wall Street: Same as it Ever Was" (No. 6), "Nothing Stays Secret" (No. 2), and the very biggest idea of the year, "The Rise of the Middle Class — Just Not Ours," which refers to growing economies in Brazil, Russia, India and China.

Now exhale. It may strike you that none of these ideas seem particularly breathtaking. In fact, none of them are ideas. They are more on the order of observations. But one can't really fault *The Atlantic* for mistaking commonplaces for intellectual vision. Ideas just aren't what they used to be. Once upon a time, they could ignite fires of debate, stimulate other thoughts, incite revolutions and fundamentally change the ways we look at and think about the world.

**Whatever
happened
to the
big
ideas?**



**We may be the first generation
to have gone backward
intellectually
from advanced modes
of thinking into old modes
of belief.**

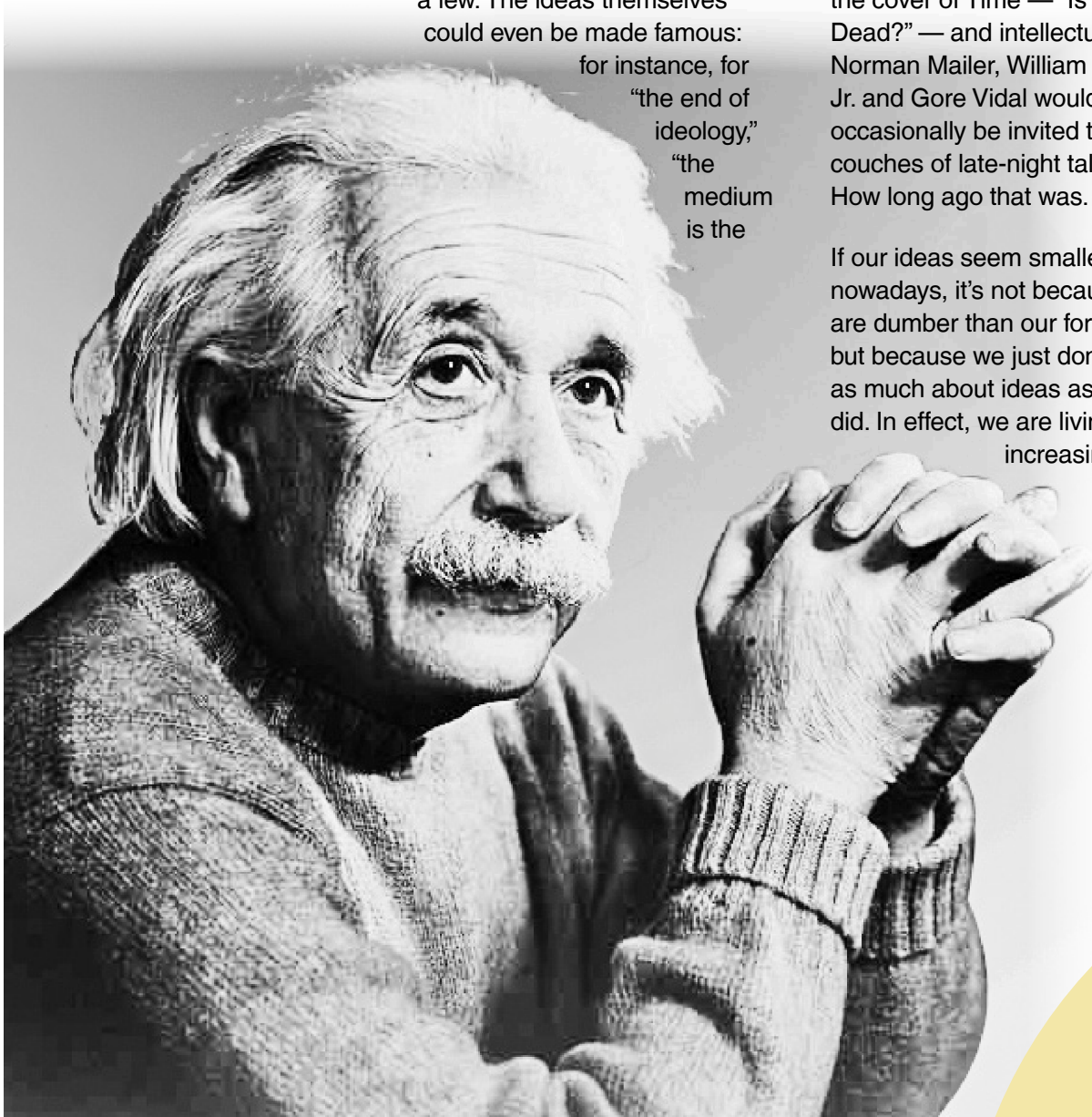
They could penetrate the general culture and make celebrities out of thinkers — notably Albert Einstein,

but also Reinhold Niebuhr, Daniel Bell, Betty Friedan, Carl Sagan and Stephen Jay Gould, to name a few. The ideas themselves could even be made famous:

for instance, for
“the end of
ideology,”
“the
medium
is the

message,” “the feminine mystique,” “the Big Bang theory,” “the end of history.” A big idea could capture the cover of Time — “Is God Dead?” — and intellectuals like Norman Mailer, William F. Buckley Jr. and Gore Vidal would even occasionally be invited to the couches of late-night talk shows. How long ago that was.

If our ideas seem smaller nowadays, it's not because we are dumber than our forebears but because we just don't care as much about ideas as they did. In effect, we are living in an increasingly post-idea world



**We prefer knowing to thinking
because knowing has more
immediate value.
It keeps us in the loop,
keeps us connected to our
friends and our cohort.**

— a world in which big, thought-provoking ideas that can't instantly be monetized are of so little intrinsic value that fewer people are generating them and fewer outlets are disseminating them, the Internet notwithstanding. Bold ideas are almost passé.

It is no secret, especially here in America, that we live in a post-Enlightenment age in which rationality, science, evidence, logical argument and debate have lost the battle in many sectors, and perhaps even in society generally, to superstition, faith, opinion and orthodoxy. While we continue to make giant technological advances, we may be the first generation to have turned back the epochal clock — to have gone backward intellectually from advanced modes of thinking into old modes of belief. But post-Enlightenment and post-idea, while related, are not exactly the same.

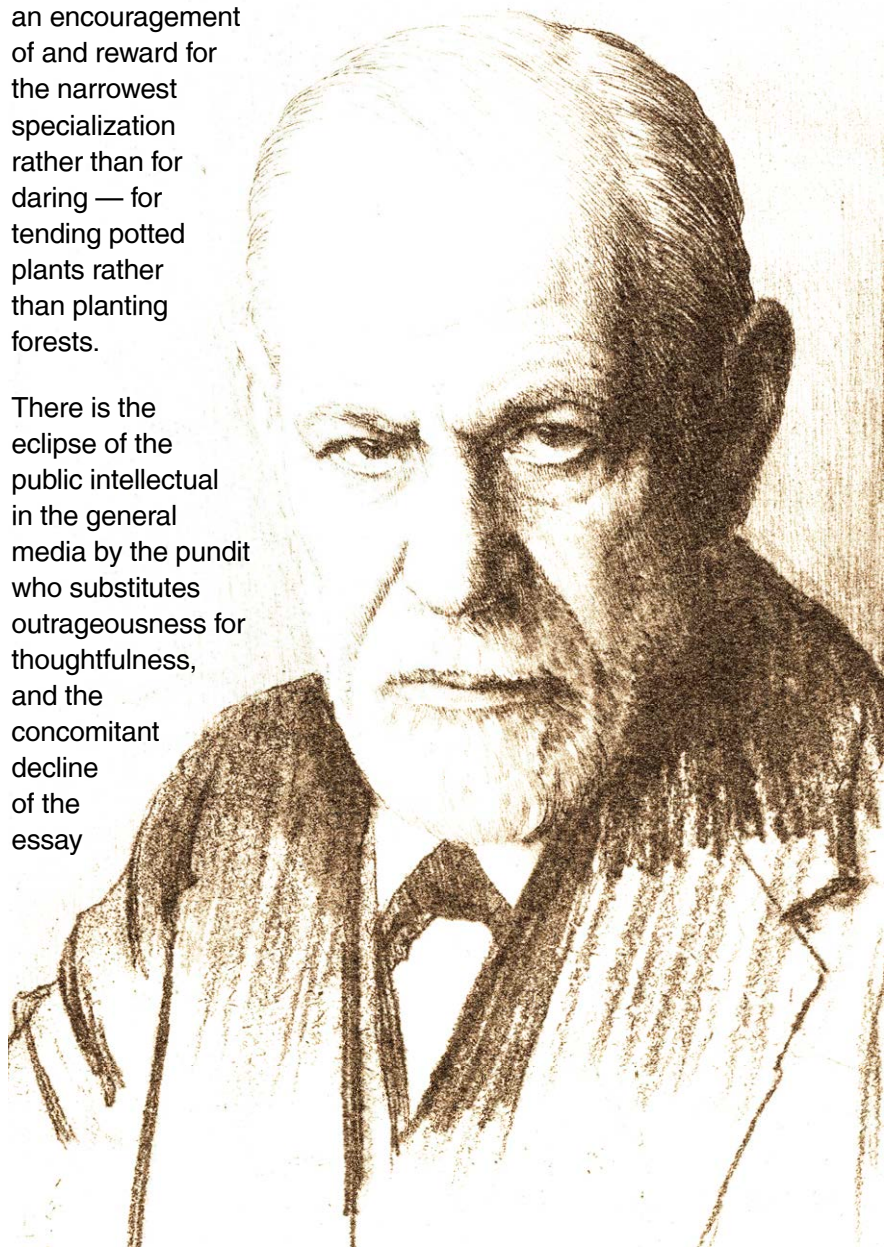
Post-Enlightenment refers to a style of thinking that no longer deploys the techniques of rational thought. Post-idea refers to thinking that is no longer done, regardless of the style.

The post-idea world has been a long time coming, and many

factors have contributed to it. There is the retreat in universities from the real world, and an encouragement of and reward for the narrowest specialization rather than for daring — for tending potted plants rather than planting forests.

There is the eclipse of the public intellectual in the general media by the pundit who substitutes outrageousness for thoughtfulness, and the concomitant decline of the essay

in general-interest magazines. And there is the rise of an increasingly



visual culture, especially among the young — a form in which ideas are more difficult to express.

But these factors, which began decades ago, were more likely harbingers of an approaching post-idea world than the chief causes of it. The real cause may be information itself. It may seem counterintuitive that at a time when we know more than we have ever known, we think about it less.

We live in the much vaunted Age of Information. Courtesy of the Internet, we seem to have immediate access to anything that anyone could ever want to know. We are certainly the most informed generation in history, at least quantitatively. There are trillions upon trillions of bytes out there in the ether — so much to gather and to think about.

And that's just the point. In the past, we collected information not simply to know things. That was only the beginning. We also collected information to convert it into something larger than facts and ultimately more useful — into ideas that made sense of the information. We sought not just to apprehend the world but to truly comprehend it, which is the primary function of ideas. Great ideas explain the world and one another to us.

Marx pointed out the relationship between the means of production and our social and political systems. Freud taught us to explore our minds as a way of understanding our emotions and behaviors. Einstein rewrote physics. More recently, McLuhan theorized about the nature of modern communication and its effect on modern life. These ideas

enabled us to get our minds around our existence and attempt to answer the big, daunting questions of our lives.

But if information was once grist for ideas, over the last decade has become competition for them. We are like the farmer who has too much wheat to make flour. We are inundated with so much information that we wouldn't have time to process it even if we wanted to, and most of us don't want to.

The collection itself is exhausting: what each of our friends is doing at that particular moment and then the next moment and the next one; who Jennifer Aniston is dating right now; which video is going viral on YouTube this hour; what Princess Letizia or Kate Middleton is wearing that day. In effect, we are living within the nimbus of an

There is the eclipse of the public intellectual in the general media by the pundit who substitutes outrageousness for thoughtfulness.

Great ideas explain the world and one another to us.

informational Gresham's law in which trivial information pushes out significant information, but it is also an ideational Gresham's law in which information, trivial or not, pushes out ideas.

We prefer knowing to thinking because knowing has more immediate value. It keeps us in the loop, keeps us connected to our friends and our cohort. Ideas are too airy, too impractical, too much work for too little reward. Few talk ideas. Everyone talks information, usually personal information. Where are you going? What are you doing? Whom are you seeing? These are today's big questions.

It is certainly no accident that the post-idea world has sprung up alongside the social networking world. Even though there are sites and blogs dedicated to ideas, Twitter, Facebook, Myspace, Flickr, etc., the most popular sites on the Web, are basically information exchanges, designed to feed the insatiable information hunger, though this is hardly the kind of information that generates ideas. It is largely useless except insofar as it makes the possessor of the information feel, well, informed. Of course, one could argue that these sites are no different than conversation was for previous

generations, and that conversation seldom generated big ideas either, and one would be right.

BUT the analogy isn't perfect. For one thing, social networking sites are the primary form of communication among young people, and they are supplanting print, which is where ideas have typically gestated. For another, social networking sites engender habits of mind that are inimical to the kind of deliberate discourse that gives rise to ideas. Instead of theories, hypotheses and grand arguments, we get instant 140-character tweets about eating a sandwich or watching a TV show. While social networking may enlarge one's circle and even introduce one to strangers, this is not the same thing as enlarging one's intellectual universe. Indeed, the gab of social networking tends to shrink one's universe to oneself and one's friends, while thoughts organized in words, whether online or on the page, enlarge one's focus.

To paraphrase the famous dictum, often attributed to Yogi Berra, that you can't think and hit at the same time, you can't think and tweet at the same time either, not because it is impossible to multitask but because tweeting, which is largely

a burst of either brief, unsupported opinions or brief descriptions of your own prosaic activities, is a form of distraction or anti-thinking.

The implications of a society that no longer thinks big are enormous. Ideas aren't just intellectual playthings. They have practical effects.

An artist friend of mine recently lamented that he felt the art world was adrift because there were no longer great critics like Harold Rosenberg and Clement Greenberg to provide theories of art that could fructify the art and energize it. Another friend made a similar argument about politics. While the parties debate how much to cut the budget, he wondered where were the John Rawlses and Robert Nozicks who could elevate our politics.

One could certainly make the same argument about economics, where John Maynard Keynes remains the center of debate nearly 80 years after propounding his theory of government pump priming. This isn't to say that the successors of Rosenberg, Rawls and Keynes don't exist, only that if they do, they are not likely to get traction in a culture that has so little use for ideas, especially big,

exciting, dangerous ones, and that's true whether the ideas come from academics or others who are not part of elite organizations and who challenge the conventional wisdom. All thinkers are victims of information glut, and the ideas of today's thinkers are also victims of that glut.

But it is especially true of big thinkers in the social sciences like the cognitive psychologist Steven Pinker, who has theorized on everything from the source of language to the role of genetics in human nature, or the biologist Richard Dawkins, who has had big and controversial ideas on everything from selfishness to God, or the psychologist Jonathan Haidt, who has been analyzing different moral systems and drawing fascinating conclusions about the relationship of morality to political beliefs. But because they are scientists and empiricists rather than generalists in the humanities, the place from which ideas were customarily popularized, they suffer a double whammy: not only the whammy against ideas generally but



"I'm supposed to write an essay on what is meant by 'The pen is mightier than the sword'. First, I need to go to Google and find out what a pen is."

rarely transform the way we think. They are material, not ideational. It is thinkers who are in short supply, and the situation probably isn't going to change anytime soon.

We have become information narcissists, so uninterested

in anything outside ourselves and our friendship circles or in any tidbit we cannot share with those friends that if a Marx or a Nietzsche were suddenly to appear, blasting his ideas, no one would pay the slightest attention, certainly not the general media, which have learned to service our narcissism.

What the future portends is more and more information — Everests of it. There won't be anything we won't know. But there will be no one thinking about it.

Think about that.

**— From *The New York Times*
by Neal Gabler**

the whammy against science, which is typically regarded in the media as mystifying at best, incomprehensible at worst. A generation ago, these men would have made their way into popular magazines and onto television screens. Now they are crowded out by informational effluvium.

No doubt there will be those who say that the big ideas have migrated to the marketplace, but there is a vast difference between profit-making inventions and intellectually challenging thoughts. Entrepreneurs have plenty of ideas, and some, like Steven P. Jobs of Apple, have come up with some brilliant ideas in the "inventional" sense of the word.

Still, while these ideas may change the way we live, they

Slice of Life

Some people are working hard to remove logos and names from their clothes and accessories. Seems there is a backlash against branding. Blogs and online discussion forums offer tips on scratching off the Ray-Ban logo from lenses and peeling away the Ralph Lauren emblem from new pairs of leather shoes. For embroidered logos, some brand-phobics use a seam ripper—a small tool for unpicking stitches.

Since 1926, the Lacoste crocodile has adorned polo shirts from the brand's tennis-star founder to President John F. Kennedy. But Max Ilich, a 47-year-old consultant has extracted the iconic reptilian from at least 10 of his shirts. He borrowed a scalpel from an ex-girlfriend to cut out the embroidery without tearing through the fabric. He wears Lacoste shirts because of their quality but finds logos "pretentious," and resents being used as a marketing platform.

Saying 'No' to

logos & brands

Vinyl logos attached to sportswear are particularly challenging. Some people have tried to dissolve them with nail polish remover. Others just wear the garments inside out.

In the 1990s and 2000s, consumers flashed brand names with pride. Gabrielle Gutierrez, 33, said Abercrombie shirts were an ideal fit, but she didn't want to display the brand's moose insignia. So she ironed-on patches of eyeballs, smiley faces and palm trees from fabric clearance sales. She describes her style as "personalized and subversive."

(Adapted from Wall Street Journal)

Lies, social media and bankruptcy

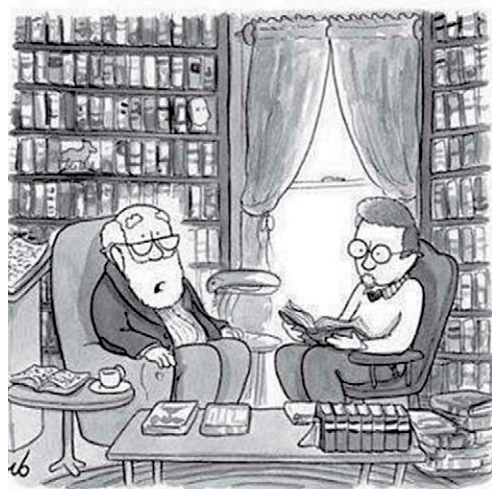
Detectives, lawyers and accountants are learning what most teenagers already know – don't always believe what you see on Facebook and Twitter.

When Ido Alexander, a Florida lawyer, saw photos a young man had posted on social media, he thought he had hit the bankruptcy jackpot. He sent an appraiser to inspect the expensive-looking gold chains and jewelry he had been posing in, which weren't declared as assets. The appraiser made another discovery now common in the age of social-media posturing. "It was really costume jewelry," Mr. Alexander says, "Really disappointing."

Bankruptcy lawyers have begun advising clients to be discreet on social media. One Florida trustee showed up in court with social-media photos of a bankrupt woman wearing expensive-looking necklaces and earrings. It turned out she owned a jewelry store and wore her favorite pieces to promote the business.

And earlier this year, rapper Curtis James Jackson III, known as 50 Cent, got the attention of the judge hearing his bankruptcy case by posting Instagram photos of himself lounging with stacks of cash. The money hadn't been disclosed in his bankruptcy-court filings. Mr. Jackson was forced to admit: The cash was fake.

And this cartoon on the paradox of studying the past



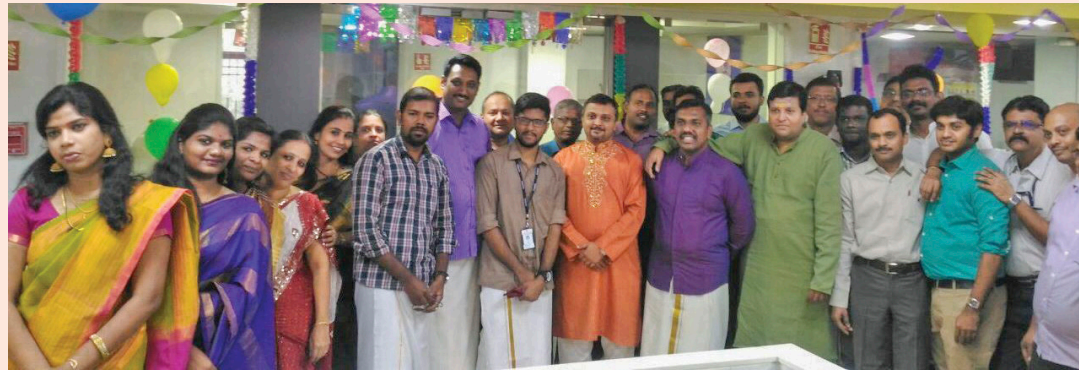
"Those who don't study history are doomed to repeat it. Yet those who *do* study history are doomed to stand by helplessly while everyone else repeats it."

(From Wall Street Journal)

A dash of colour and a brightening of moods

Year-end festivals such as Diwali, Dussehra and Christmas brought cheer and vibrancy to Thermax work centers across India. Employees had a great time at a range of fun activities – treasure hunt, musical chairs, dance and various games.

The ripples from these festivities are bound to energise. A dash of colour, a brightening of moods bringing forth the collaborative energy of diverse cultural practices.





Snapshot: Thermax's upcoming project for Reliance Industries at Hazira

Thermax is supplying nine 500 TPH boilers for Reliance's petrochemical projects in Dahej and Hazira in Gujarat. By substituting cheaper fuels like Indian coal, Indonesian coal and petcoke, these Circulating Fluidised Bed Combustion (CFBC) boilers will hike up energy efficiency and reduce production costs.

Some salient facts about the project:

- Total tonnage - 90,000 metric tonnes
- Insulation area - 108,000 m² – about the size of 8 cricket grounds or 14 football fields
- Peak manpower at both sites – over 8,000

