I know little about manufacturing. I have never been particularly interested in it, never been involved with it in any mode – teaching, research, consulting. Nevertheless, my recent visits to India have started me thinking.

Based on whatever I have seen, what lessons can I convey or what points can I make on manufacturing? Do I have a point of view? Do I have something that I believe in? Here are three examples from organisations I have had any dealings with, as a part of my research sample.

The first is a very small company called Richardson Sheffield. When I got to know it first, it was about £8 million. By 2002, its sales had reached about £60 million. Even today (in early 2004), it is a small company. It is a cutlery and knife manufacturer in Sheffield, in the United Kingdom.

Traditionally, Sheffield was the centre of the cutlery industry. Over the last ten years, the industry has been decimated. In 1995, cutlery production in Sheffield was 6% of its production ten years ago: a 94% decline. This happened because of low cost competition from the Asia-Pacific.

But in the same period, Richardson Sheffield emerged as the unquestionable global leader in the cutlery business. Its production increased by a factor of about nine. It is, today, the unquestionable global leader in volume terms, in quality terms, in margin terms, in the cutlery industry. This is my first example.

My second example is in the United States. It is a small factory currently owned by Asea Brown Boveri (ABB). It manufactures electrical relays, a mature product. It used to be a part of Westinghouse for 50-odd years. It never incurred a loss, it was about $8 million. By 2002, its sales had reached about $60 million. Even today (in early 2004), it is a small company. It is a cutlery and knife manufacturer in Sheffield, in the United Kingdom.

Then ABB acquired Westinghouse’s transmission and distribution business in the US and with it came this small operation in Coral Springs.

Now it is called ABB Relays Inc, in keeping with ABB’s norms. It is structured as a small company, basically a manufacturing operation. Over the next three-and-a-half years profits quadrupled.

But profit is a noisy measure, many things affect profit. The interesting parameter is growth: it began growing at about 25% per year. In 1996, the growth was about 32%.

My third example is from the Asia-Pacific. This is the semiconductor operation of Philips in Taiwan. It is a joint venture under the name TSMC. If you look at TSMC by the most important measures – benchmarking measures – in that business, TSMC outperforms its equivalent facility of Intel by almost a factor of 2:1. That is right across.

Yields, for example – 1998’s adjusted yield was about 98.3% as opposed to Intel’s (at that point) at about 96.3%.

It is a joint venture between a producer in Taiwan and Philips, neither of which has a leading edge in the semiconductor industry. Nor does it have the enormous technological horsepower of Intel or others such as NEC, Hitachi or even Sun.

Looking at the three factories, what explains their performance? Is there anything in common? Is there anything that I can draw upon from my limited exposure to three very specific manufacturing situations, that have helped them achieve what they have achieved?

You cannot renew a factory. You cannot renew a company, you cannot renew a business without renewing the people.

Technology is important, clearly all those other factors which managers consider important are important, but at the end of the day, based on the little I have seen, perhaps the most vital element, and I deliberately use the phrase ‘most vital element,’ is people.

You cannot change an organisation without revitalising people.

Revitalising people

Revitalising people is an attitudinal change. People’s attitudes have to change. There is a new word every time these things come up and the new word now is ‘mindset change.’

So, company after company is launching expensive, large-scale, culture change programs with the objective of changing the mindset of their people. But then you ask: How likely is that? Can you really teach an old dog new tricks?

Generally, adults do not change their attitude. They do so only in response to profound personal tragedy, profound personal grief. Otherwise, things happening in the office, trying to get manufacturing competitive advantage, etcetera, do not change attitudes - not of adults.

That being the case, we have a problem. I really believe, revitalising manufacturing, revitalising a
business, revitalising a company, takes, among other things, the revitalisation of people.

If that requires changing people’s mindsets, yet you cannot teach old dogs new tricks, where does that leave us?

Much more important to revitalising people is changing the context that management creates around people. What do I mean by context? Let me try and explain that through my own experience.

The smell of the place

I live in London and have done so for several years now. Before that, for the past eight to nine years, I taught at a place called INSEAD and lived in Fontainebleau in France. But my hometown is Kolkata. That is where my parents lived.

So, every year, in July, I used to come to Kolkata for almost a month. Why July? Because that is the only time my children had a sufficiently long break. The whole point was to keep them in touch with my parents. Think about it – downtown Kolkata in July. The temperature is over 100°F with humidity of 98%.

The reality was that I felt very tired during most of the vacation. Most of it I spent indoors and a lot of it simply in bed.

I used to live in Fontainebleau. It is a pretty little town, 40 miles south of Paris. What makes it outstanding is, that around it is, the protected forest of Fontainebleau, which is one of the prettiest forests in all of Europe. You enter the forest in spring, with a firm desire to have a very leisurely walk, and you cannot.

There is something about the smell of the air, about the trees, that will make you want to run, jog, jump up, catch a branch, to throw a stone, to do something. You will find that even though you entered the forest to have a leisurely walk, you are doing something else – and that is the essence of the issue of revitalising people.

Most large companies in India and abroad end up creating ‘Downtown Kolkata in Summer’ inside themselves.

What does ‘Downtown Kolkata in Summer’ look like in most large companies, and, I relate to this in the sense of the phrase, ‘the smell of the place.’ We intellectualise a lot in management.

The reality is, that you walk into a sales office, factory, head office and in the first fifteen to twenty minutes, you will get a smell. You will a get a smell in the quality of the hum. You will get a smell in the looks in people’s eyes. You will get a smell in how they walk about. That is the smell I am talking about – in most manufacturing facilities, not just in India.

What is the smell when it is a part of a large organisation? Constraints. Top managements – you – are very wise, have lots of information, have good people. So, by products, by customers, by markets you create great strategies. You also work very hard – sixteen hours a day, eighteen hours a day. You take all the decisions, know exactly what needs to be done.

But what does this mean for those working in the shop, in the factory, sixteen levels below you? How does your hard work boil down for me? Constraints – that’s what comes down to me.

All the systems that top management create – human resource systems, manufacturing systems, planning systems, budgeting systems – each by itself is totally justified.

However, collectively, what does it feel like for me, sixteen levels below, down in the factory floor? That I have to comply. All those systems hang like a black cloud over me. So, I start asking myself, why does my boss exist? Not just my boss, why does the entire management infrastructure exist?

As far as I am concerned, they exist for one reason, and, one reason alone – to control me. To ensure that I do not do the wrong thing.

The job becomes a contract. The budget is a personal contract, transfer prices are contracts, relationships between colleagues and departments and divisions, are all contracts.

That is the environment - constraint, compliance, control, contract - that is the smell of the place. And yet, what is the behavior top management wants from me?

You want me to take initiative. You want me to cooperate, voluntarily, with others around me. You want me to learn continuously, and bring the benefits of that learning to my work, to my job, to the company, to its success. How do we get into those behaviors, if around me, it is the smell of the place you create?

Organisational renewal

As opposed to constraint, there is stretch. What do I mean by stretch? In companies, particularly in large companies, but I think it is present across the board,
there is a pervasive disease called satisfactory underperformance. By the time the company is in a crisis, the problem is easy.

The real problem is not when the company is in a crisis. The real problem is often a long period before the crisis, when the company is coasting along in a mode of, 'satisfactory underperformance.'

It happens when everybody knows that given the resources, given the brand names, given the quality, given the technology, given the people, given the equipment, given all of that, the company is simply not doing as well as it could. But, as opposed to confronting reality, top management creates rationalisation and brings down the level of aspirations to that of satisfactory underperformance.

Stretch is the antithesis of this. Stretch is trying to do more, rather than less. It could be anyone's efforts. Not every individual is trying to make the company a million-dollar company or pushing whatever vision you have. That is not stretch.

Stretch creates enormous tensions, because when every individual is continuously pushing himself or herself, in the process, he or she is pushing everybody around, pushing the management, pushing the company.

**Individual behaviors**

As opposed to top management creating strategy and all the decisions coming from there, the challenge of top management becomes creating an exciting sense of purpose, an ambition that is clearly articulated, that is exciting to every individual, that “I can understand, have a sense of pride in and can relate to.”

Just the ambition, or a statement of ambition, is not good enough for creating Stretch. It is not good enough to say, “This is what we will achieve.” It is equally important to describe who we are, what we want to be, articulate a set of values, and bring big ambitions and values down to the level of each individual. Each individual can then relate to the ambition.

This is the point where Stretch begins: beyond the immediate ability to achieve. It is enormously worthwhile, it gives an enormous sense of pride.

Stretch is the antithesis of constraint; as opposed to compliance, there is discipline. This is not to say we don’t need systems – not at all. 3M, one of the companies I find fascinating, has a rigorous system; Intel has rigorous systems, Richard Sheffield, a small company as it is, has rigorous systems.

The issue is not one of having, or not having, systems. The issue is what does the management do with the systems. Do you use the systems to impose compliance on me, or do you use the systems to instill self-discipline into my day-to-day behavior?

Self-discipline is management by commitment. Self-discipline implies you do what you promise. If you promise a 14% reduction in inventory, you die to deliver that. If there is a meeting at nine, everybody is in the room at nine.

If the team takes a decision that you were a party to – even though you did not agree with it, you opposed it, and argued against it – at the end of the day you accept the decision that was taken, and you do not start a process of debating it so as to undermine the decision. That is self-discipline.

Intel has a norm it calls ‘constructive confrontation’, which is an extraordinarily polite and somewhat erroneous way of describing the processes of Intel. Here, not only are you allowed to talk on any topic that affects you, you are obliged to express your views, and argue for them as strongly as you can.

That is the company-wide norm. So that is constructive confrontation: absolute head butting. But at the same time, on the flip side of the norm, Intel says:

1. at the end of any meeting, a decision will be taken
2. at that point of time, agree or disagree, but commit

As opposed to control, there is support. Control is the perception, “My boss exists to control me, to ensure that I do not do the wrong thing.”

You can achieve a genuine change when people sixteen levels below really believe that their boss and ultimately, the entire management infrastructure, exists for one reason and one reason alone: to help them win.

Win by personal coaching, guidance, mentoring. Win by helping them gain access to the resources of the rest of the organisation that they may not have access to – but ultimately help them win.

Finally, there is trust. Not just as the contractual, instrumental version of trust that says, “if you and I come to a deal, I trust you that you will keep your side of the deal.” It is much more than that. Trust here says, “You know, we are a part of the same organisation and I trust you. I trust you enough to let go of you in the organisational trapeze.”
My argument is, if you talk about manufacturing excellence, while all the others are preconditions, without which you do not sit at the table, to my limited understanding, you do not win even if you have those factors.

At the end, the true source of competitive advantage today is not issues of scale or of technology. These have become preconditions. The real source of competitive advantage today is much more micro.

It is those kinds of behaviors of individuals in the organisation that provide truly sustainable competitive advantage, where people, at the level of each individual, take initiative, collaborate, have self-confidence, have commitments, to themselves, to their teams, to their unit, to their organisation.

They have the ability to learn and for high-quality execution. How do you get those people to do this?

Take the example of 3M. The whole of 3M is a history of accidents. The most well-known accident is the Post It Note. 3M is a sand paper company and it wanted a strong glue for the sand paper. The research screwed up and came up with a weak glue.

For eight years that glue sat on the desk, till Art Fry came by and found a way to apply this very weak glue on paper and that is how one of the most successful innovations at 3M was born. This story is widely known.

What is more interesting is that the history of 3M is replete with accidents of this kind.

Another highly successful 3M product is the computer privacy screen. And, its genesis is uncannily familiar. Andy Wang, a young Korean came out of the R&D wing into the optical products systems business where its microluber technology had been hanging around for almost fifteen years. Two earlier efforts had not worked.

So, he modified the technology a bit, linked up with the marketing guy, and a woman in the office supplies division. After two more failed introductions, they came up with the third one, the hot new product of 1994: the Computer Privacy Screen.

3M managers readily admit, “Yes, you know, we always stumble into these things.” But the point is: you have to be in motion to stumble.

What is it that keeps 3M in motion? What is it that keeps this continuous initiative going within the organisation? And then, as I look at companies that have this ability -- 3M is an example, but so is Intel. Cartier, the fashion company, is a bit like that.

What is common, is the yin and the yang between stretch and discipline: the combination and the tension between them. With stretch and without discipline, you just float up. Without stretch, just discipline, over time becomes corrosive. But combine those two and the mutual tension between them leads to this magic of individual initiative, of entrepreneurship, right through the organisation.

Every company is trying to get more collaboration: from right down at the plant level, all the way to collaboration across divisional presidents in the corporate executive team.

And, most are finding them to be mechanistic solutions. We need more collaborations in our manufacturing operations. So, all right, we have this council. The council will meet every three months and share learning, share knowledge.

The first time the council meets everybody has a terrific time. People get to know each other and it is very exciting. The second time they meet, it is a good time, but there’s no clear answer to, “What am I doing here?”

The third time they have to meet, everybody finds important customer engagements and, therefore, their diary is full and they cannot come for the meeting. What you really need is not that.

What you really need (as the CEO of Cannon put it in terms that I find most appealing) is biological self-control. If your finger gets cut, every organ in your body that can provide any support to it automatically does so, immediately, without being asked.

That is what is needed in an organisation. So whenever one unit, whenever one activity, or an individual, faces an opportunity, a problem, an issue, where anybody who can help, helps without having to be asked.

How do you get that quality of collaboration in a large, complex organisation? I believe, it is a combination of Support on the one hand, and trust on the other. How do you get learning? I think it is the tension between stretch and support.

Ordinary people, extraordinary results

I want to assert three things. First, I believe, it is possible, certainly in medium and small-sized organisations, and even in very large organisations, to create that smell, and to protect it over a long period of time.

THE SMELL OF THE PLACE — ordinary people producing extraordinary results
Professor Sumantra Ghoshal (1948-2004)
THE SMELL OF THE PLACE — ordinary people producing extraordinary results
Professor Sumantra Ghoshal (1948-2004)

My evidence, or my illustration, is the optical products division of 3M. Walk into any part of the optical products systems division of 3M and you will smell it. You will describe it differently. You will use different words to describe it, your own words.

But you will describe exactly what I am trying to describe to you. Because you will smell it and for all that I can tell, that division has been like that for about 30 years. Even for a management team that inherits a ‘Downtown Kolkata in the Summer,’ it is possible to create a ‘Fontainebleau Forest in Spring.’

My second assertion is that it is possible to do so in a reasonably short period of time.

Let’s take a look at the semiconductor division of Philips, a company with a significant presence in India. In 1989, Philips fell off the precipice with a Guilder 7 billion loss, net, of tax. If you looked at the cash flow projection, Philips would go bankrupt in about eighteen months. That was 1989.

If you ask which business was most responsible for Philips’ misfortune, it was semiconductors. Semiconductors lost Guilder 600 million in 1989. What about its strategic position?

Semiconductors is a capital-intensive business: 130% depreciation per year; R&D minimum 15% of sales. If you put those numbers together you cannot really have a viable semiconductor business without a 6% to 7% global market share in your category. Philips had 1% and, that too, in the wrong products.

The high-growth, high-margin products of semiconductors were in data processing, computers or telecommunications or automotive and so on. Philips products were all in the mature, low-growth, low-margin range; basically, in consumer electronics. So, the situation was strategically unsound and financially a disaster.

Consider now the smell of the place. Under the managing director of the business group were four divisions, one of which was semiconductors.

Three of the four divisions did not talk. One could not really have a senior management meeting because three of the four people did not talk to each other. Imagine, if that was at the top, what was going on throughout the organisation? Talk about ‘Downtown Kolkata in Summer’!

Today, Philips is not out of the woods by any standards, it is still deep in trouble and still struggling with enormous challenges ahead. But the flow of the red has stopped.

And what has kept the company going over the last four years is the semiconductors business. It chipped in about Guilder 500 million, net, in positive cash flow each year: a totally radical shift in financial performance. From about (+) Guilder 600 million in 1989, in 1993 it was (+) Guilder 417 million.

A number of things helped the semiconductor business. The industry situation changed, but what was amazing, was how the smell of the place changed. In fact, that is where I got the phrase, ‘Smell of the Place.’

A young engineer at its power semiconductor factory in Scotland once told me, “I joined Philips for two years. We all know it is good place for training, but know never to get stuck there. It is not a place to make your career.” Later, he says, “Now, I am not so sure. Maybe this is the place where I will make my career. The smell of the place has changed.”

Two-and-a-half years in a truly global organisation! A determined management team that inherits a ‘Downtown Kolkata in Summer’ syndrome can transform the place into a ‘Fontainebleau Forest in Spring’, in a reasonable period of time.

Based on little research and understanding, what I believe to be the real challenge for top management in India, is that there is too much of ‘Downtown Kolkata in Summer’ ambience.

One cannot win the manufacturing game on the strength of technology, scale or government policy. These are essential, and vitally important. But winning is possible only on the basis of the individual, initiative, work and energy.

That is the real challenge before top management. True competitive advantage is the tremendous unused potential in our people. Our organisations are so constructed that most employees are asked to use 5% to 10% of their capacities at work. It is not a matter of hours or effort. It is the capacity.

When the same individuals go home, they run their households, build a summer home, lead their families. The real challenge of management is to recognise and employ the untapped ability that each individual brings to work everyday.

My third assertion. I fundamentally believe that a significant part of the challenge of management in India, is to get a bigger market share of the missing 95% human capabilities. The real function of management, is to make ordinary people produce extraordinary results.