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# *Navigating Strategic Inflection Points*

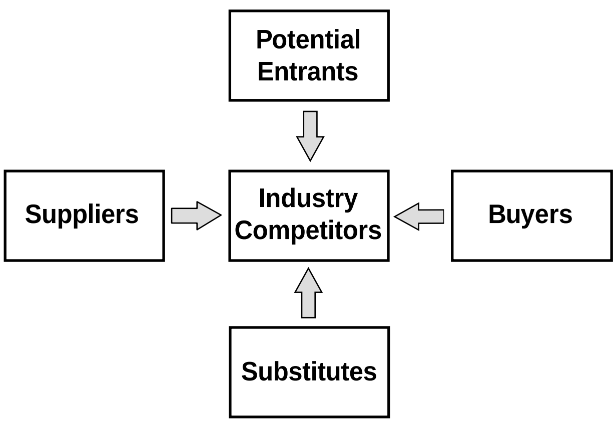
*Dr Andrew S. Grove*

***In this first of the 1997 Stockton Lectures, the speaker reflects on the turning points which can make or break even the strongest of businesses. How can managers distinguish a "Strategic Inflection Point" from the normal hurly-burly of corporate life? What generic series of actions are necessary to convert the threats of change into opportunities? What are the implications for managers as individuals with their own careers and responsibility for the careers of those working under them? Throughout the article the generic issues are illustrated with examples ranging from small-town retailing to X-ray vision.***

My recent book, *Only the Paranoid Survive,* is really about navigating what I call the "Strategic Inflection Points". For reasons that I could never understand, my publisher was less than jazzed about calling a book "Strategic Inflection Points". So we ended up calling it *Only The Paranoid Survive*. This title has nothing very much to do with the book but has managed to get it on best-seller lists.

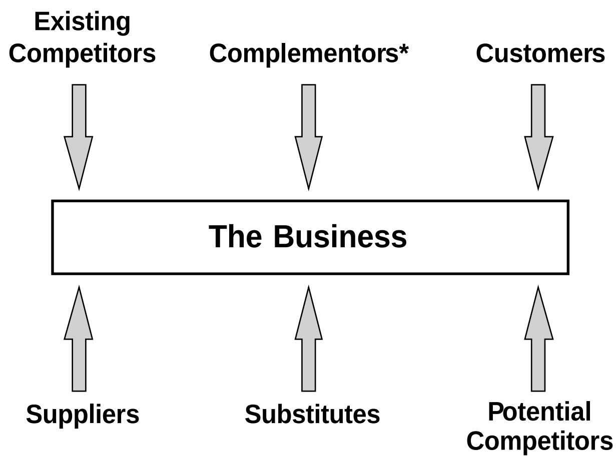
I do not know whether business academics still use the phrase "Five Forces Analysis". Five Forces Analysis (figure 1), which originated at Harvard, segments the different forces that affect the competitiveness of a company or an organisation. Four of these forces are listed as suppliers, buyers, potential entrants and substitutes. The fifth is the force inside the industry itself - the force of rivalry and competition. More recently, as industries have changed, Five Forces Analysis has been updated by junior colleagues of Professor Porter and a sixth force has been added, which was *complementors*. This is one of the most subtle and significant of the forces: the dependence that you develop in a business on companies whose products work in conjunction with yours and in such a way that the two of them together have a synergistic effect.

Figure 1
**Porter's Five Forces**




Source: Competitive Strategies (1980, Free Press)

Figure 2
**Updating the Five Forces Analysis**




* Significance: Counteracts 'Substitution'

Figure 3
**Six Forces - With a "10X" Force**

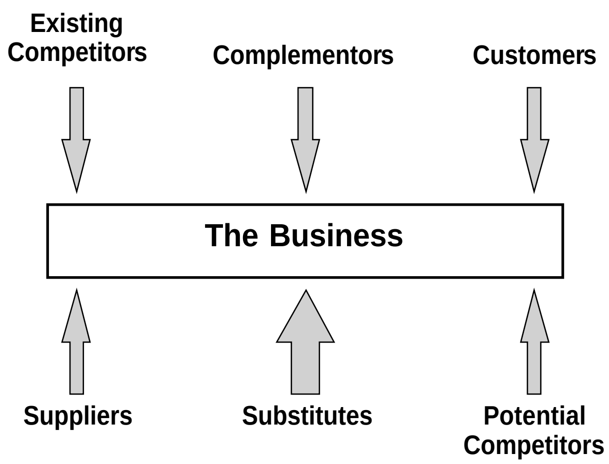
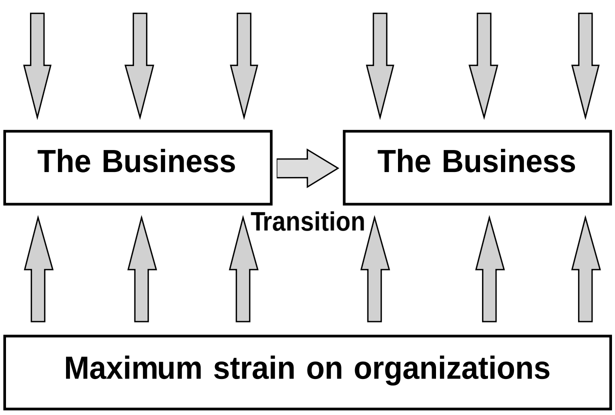



Figure 4
**Transition Between Two States of a Business**




One of the key examples cited in the context of *complementors* is the relationship between Microsoft and Intel. Microsoft's software and Intel's microprocessors together make up the significant part of modern computers - personal computers - and neither company without the other one would be able to do the job. Analysis of the five or six forces (figure 2) generally involves a business where these forces are more or less in equilibrium with each other. And the question asked is whether these forces create a favourable or unfavourable environment for an industry or company. What I want to focus on here is what happens when one of these forces becomes very, very large - ten times larger, say, than any of the other forces.

By way of illustration, let us examine one of those forces, a *substitute*. What happens when the force of a substitute is, say, ten times as large as the other forces (figure 3)? The whole picture gets distorted. Under the weight of an extraordinary force acting on a business, the very way the business is conducted gets distorted. In those circumstances, what tends to happen is that the framework in which the business operates changes and, over a period of time, leads to a different type of framework, where there is a business operating under a different set of influences. In other words, one of the influences is so large that the whole business gets re-invented in a very different way and ends up as a completely different structure (figure 4).

What happens in the middle, during the transition? That is the period of time that I call the Strategic Inflection Point (figure 5). During a Strategic Inflection Point, the way a business operates, the very structure and concept of the business, undergoes a change. But the irony is that at this point itself nothing much happens. That is the nature of an Inflection Point: it is a kind of a gentle curve. Yet at a point where nothing else happens, you must determine whether the future trajectory of that curve is going to head up or down.

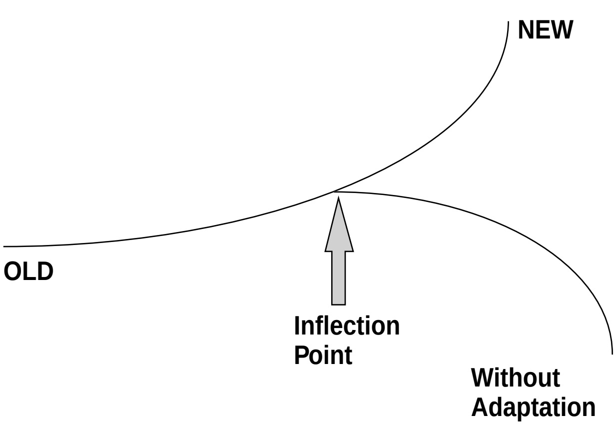
That subtle point is like the eye of a hurricane. There is no wind at the eye of the hurricane, but when it moves the wind hits you again. That is what happens in the middle of the transformation from one business model to another. The irony is that, even though these are the most cataclysmic changes that a business can undertake, more often than not these changes are missed. When a new competitor comes, you notice it. When you lose market share, you notice it. When a supplier jerks you around, you notice it. But when you are at a Strategic Inflection Point, you think nothing is going on because the curve is very smooth, the centre of the hurricane has no wind and you miss the whole thing until you are descending the curve.

*Wal-Mart and the small town retailer*

So much for the general. Let us now look at some examples of Strategic Inflection Points in practice. One of my examples comes from a story that I read about Wal-Mart, which is a very US phenomenon. Wal-Mart is a major retailing chain, probably the largest retailer in the world. At the same time, it is one of those discount retailers that specialises in servicing small towns in rural America. Traditionally, small towns have not been well-served by large retailers; they have been served only by relatively small stores, general-purpose stores, or low-cost stores, which are ripe for being toppled. So what happens if you are one of these small-town retailers, the bulldozers arrive and a sign goes up in the best corner of the town: "Future Home of Wal-Mart". When that sign goes up your life as a small-town retailer changes forever because you are not going to compete against just any other retailer. You have had retail competition before in that town; but this is Wal-Mart. Wal-Mart has satellite communications that instantly tell headquarters when one piece of packaged goods is taken off the shelf and checked out, it has fleets of trucks that are loaded and unloaded by the most modern operational research, so that they are never empty as they go around in never-ending circles. Wal-Mart can operate at margins that are rounding errors to you if you are a small-town retailer.

At that point, if you think that one more competitor has just joined the scene, you have just missed a Strategic Inflection Point. If you realise the difference and as soon the sign goes up you double your efforts to figure out how you can differentiate yourself from Wal-Mart - how you can deliver a service that Wal-Mart cannot even dream of providing - then you have a prayer of a chance of surviving. That is one example.

Figure 5
**Strategic Inflection Point**




*AT&T and world telephony*

Another example is the story of what happened in the early dawn of one night in 1984 when Charles Brown, who was the Chairman of AT&T, started calling his various Vice Presidents. He told them that, after some consideration, he had decided not to fight the US Justice Department, which was in the middle of a federal anti-trust suit against AT&T, but had decided to voluntarily go along with the break-up of AT&T. That phone call started the most major changes ever visited upon an industry, which resulted in the break up of an old US-wide monopoly into the competitive long-distance and regional monopolies of local access providers in the United States. This had a major impact on all equipment providers to AT&T, because it had been a fully-integrated company.

Around the same time as that change, I called an AT&T location in Colorado where we were selling chips to some of their equipment manufacturing divisions. In those days, I did not understand Strategic Inflection Points and I did not understand telecommunications law or de-regulation. But I certainly understood that these people did not know which side was up in their own company. They did not know who to call for what decision. I have never seen a bunch of managers who were more pre-occupied and more confused about what was going to happen in this new world. That was a Strategic Inflection Point for AT&T. It was a Strategic Inflection Point for MCI, a soon-to-be telephone provider, and it was the beginning of multi-year arch of regulatory changes that is now spreading to the rest of the world.

*Getting out of sales*

The computer industry is another perfect example from my standpoint because of our introduction of a very cost-effective personal computer, about ten times more cost effective on a performance basis than the mainframe type of computer that it replaced. At that time, the computer industry was structured as vertically-integrated companies competing against other vertically-integrated companies. Over a period of a few years that structure was demolished and the business of the surviving companies was completely changed. Computers are now no longer predominantly sold by sales people: computers are predominantly sold by companies like Wal-Mart - an indirect distribution channel. But computer operating systems are now standard industry-wide - which means a valuation of a hundred-odd billion dollars for Microsoft; and the guts of computers are standard industry-wide - which means a comparable valuation for Intel. The companies that have been proudly servicing and selling vertically-integrated computers for decades have struggled and downsized. But nothing has really helped a lot because they were dealing with a kinetic force, a Strategic Inflection Point that changed the very nature of the business. It was not a matter of better execution; it was a matter of lower costs. It was a case of adapting to survive in the new industry structure.

### *The Internet*

Right now, whatever industry, commercial entity or governmental agency we might be working in, we are all in the middle of a Strategic Inflection Point that has been visited upon us by the Internet. In a world where everybody's computer storage is one mouse click away, when every piece of information, every image, and every sound and every motion picture can be turned into computer data, I think this is going to be the mother of all Inflection Points for all industry and commerce, though most specifically for the service industries.

## Signal or Just Noise?

Whilst all Strategic Inflection Points are changes, not all changes are Strategic Inflection Points. You can get overly paranoid and into a mode where you anticipate Strategic Inflection Points and assign that kind of power to a variety of changes, where you just run from one thing to the other. The main effect of this behaviour will be to drive yourself, your boss and your subordinates nuts.

One of the most important questions therefore is how to distinguish a Strategic Inflection Point from a non-significant change. I wish I knew. If I did, I would not sell it for a mere dollar or two, because the answer to that question would be alchemist material. However, I do have a few dollars' worth of observations that may help. The phrase, "Is it a signal or a noise?" is an electrical analogy: electrical blips can represent a digital signal or they can be just an electrical noise in the circuit, and instruments have to be designed so that microprocessors and computers can tell one from the other. Similarly, we have to design our own organisations so they can tell one from the other.

### *Risking all with RISC*

Intel has gone through a variety of technological changes. With two of them we almost sank the company. The first concerned RISC ("Reduced Instruction Set Computing") technology that everybody in the industry thought was going to revolutionise the design of microprocessors. Half of our people thought so too - but the other half did not think so. So we hedged. "Can we afford *not* to pursue both options?": once somebody asks that question, run for cover, because the answer is always "of course not". Therefore, you pursue both options, which means you pursue the right option with half of your resources, because the other half of the resources are working on the wrong option. So, you almost guarantee that neither option will work. That is what we did for a long period: pursuing RISC technology and not-RISC technology. Finally, at the eleventh hour, we woke up and killed the RISC project and moved everybody onto the standard Intel Architecture Project. We managed to pull out of it, but another half a year of dithering and hedging could have lost us a whole market position.

### *The Customer is always right*

The next example relates to the Pentium Processor two years ago, where a very minor technical problem almost sank us due to our mis-perception of who our customers really were and what they expected from us. At Intel, we are engineers; we think we understand our products - and most of the time we do. We figured out that the problem of the pentium processor was minimal and if customers wanted this problem fixed, we were ready to convince them, one at a time, that they did not need a different product. But when you are up against millions of consumers who read about these things in the newspapers, you lose. We almost lost because we were obstinate: we were so sure that we were right and the customers were all wrong that we were going to prove our point all the way to losing the entire generation of microprocessors that this involved. Fortunately, again, we woke up at the last minute.

### *X-ray vision*

Ten years ago, when X-ray photography was going to revolutionise the industry, it looked like a Strategic Inflection Point. We were very concerned about it. Had it in fact been a Strategic Inflection Point, the Japanese manufacturers would own all of Santa Clara, called Silicon Valley today, because they were way ahead of us in X-ray photography and we did not do anything about it. We analysed it, and went back and forth and debated it and decided it was not a Strategic Inflection Point. And we were right. However, if I look at where technology will have taken us ten years from now, for the evolution of microprocessors to continue we are going to need X-ray photography. So what we correctly ruled out as not being a Strategic Inflection Point ten years ago may very well be a Strategic Inflection Point at the right time. The moral of this tale is that a particular technological, societal or commercial phenomenon that comes upon you may not be a Strategic Inflection Point at one time - but may well be at another time.

*The Internet speaks*

That brings us to the Internet. I think everyone agrees theoretically that the Internet will change everything. But we will not agree *when* it will change each individual business. If you call it at the right time, you will be fine; if you call it too early you will go into all kinds of contortions that will not work because you are too early and you will come to the conclusion that the Internet is not a Strategic Inflection Point. Then, just around the time you convince yourself it is going to turn into a Strategic Inflection Point, you go down! So there is this caution not about "is it or isn't it?" If it has the power to turn into a Strategic Inflection Point, the key question is when that power will peak.

## Warning Signs

The next question concerns what you can do to recognise Strategic Inflection Points. What are some of the signs that give you a hint? No tests are a hundred per cent: I cannot give you a precise formula. But one of my favourite tests is the "silver bullet test". If your key competitor is about to change, imagine you have a silver bullet, a single bullet that you can shoot one competitor with. Who are you going to shoot with it? This test really forces you to decide because there is no second choice - only one. Your gut will tell you which one it is. When that changes and the answer you get to the question is somebody else, that is a good sign that you are passing through a Strategic Inflection Point; because, under a different scenario, the people that represent a threat to you change and that is one of the telltale signs that you are facing a different business scenario.

The same process applies to *complementors*: the people that you are most dependent on to make your product work best. Have you ever had that feeling that people around you have kind of "lost it", that nobody "gets it" any more? People are talking gibberish - URL, TCPIP, asking did you "check it out"? They are using phrases representing a whole new vogue, but which are a little weird to you. When that happens, either they have "lost it" or you have "lost it". If there are cross currents like this going on in an organisation, that is something to worry about. People do not go nuts all of a sudden: but the people we are talking about here are people that you have worked with for a long period of time. You do not yourself "lose it" normally; so when something hits you differently, it is worthwhile stepping back to ask why. The conclusion to come to - when either they do not "get it" or you do not "get it" - is maybe that the "it" that you do not get is no longer the same thing that you used to talk about. These are all warning signs.

***"you cannot cut off one person's head one day and balance it out by being nice to the next person"***

## Tools

What are the tools that help you distinguish that "it"? Most helpful of all are the Cassandras in your organisation: the people who tell you the bad news. Not all organisations have people telling you the bad news if you are in senior management. If you are in the bowels of the organisation, all you hear about is everybody telling you bad news - about what's going wrong in their department, and what their bosses are doing. But you are in senior management. The question is whether bad news is likely to reach you. One of the issues that decides that is the tendency of your organisation to be influenced by Fear.

Without even realising it, we very often take our frustrations about bad news out on the people that bring it to us. But if you do that you will not get bad news. Of course in a sense this method works: in as much as bad news hurts, if you hurt the bearers of bad news, they will stop bringing it to you and it will stop hurting. But that is not a very good technique for getting information from the Cassandras. Maybe you realise you have made a mistake and you start being nice to people and thanking them when they bring the next piece of bad news - you treat them with respect and all that sort of thing. But that does not work either. This system is not symmetrical: you cannot cut off one person's head one day and balance it out by being nice to the next person. One cut-off head will take you years of behaviour before it washes out of the organisational or institutional memory.

If you want people to bring you bad news, and you want to create an environment in which that is possible and encouraged, you must not create fear by punishing or penalising in any way the bearer of bad news. If you are good that way, and if your company is good that way, the people who are closest to a problem - closest to a technology, closest to a sales situation, closest to a customer situation and therefore those who see the first signs of Strategic Inflection Points - will quickly bring them to you in management. The informational structure of the organisation tends to isolate you, the manager, from field news, or from first-hand news. So it is vital for you to ensure that the Cassandras bring the news to you.

Sales organisations are particularly good at being Cassandras. They are the first to get beaten up by the customers, to notice that they are losing more orders. They require access and a channel for bringing bad news to senior management, so that senior management can integrate it back into the organisation's overall strategy.

Debate is an extremely important measuring tool, a method of sorting through the "is it?" or "is it not?" type of questions. Why? The noise signals and information that come out of the beginning of a Strategic Inflection Point are very disorderly. They are inconsistent, sporadic and do not come well-digested. I said earlier that your job as senior management is to integrate all those noises and form a more complete picture out of them. The way you do that is to take these pieces of information and sort them out in the course of an intellectual exchange, debating it out: "I heard this, but I heard that; does this mean this, does this mean that?". And in the process, as you keep doing it, the picture gets filled out and the inconsistencies get kind of de-blurred and the picture becomes more coherent and more seamless. Gradually the big question "is it or is it not?" becomes a little bit clearer.

***"The first phase of organisational reaction to a Strategic Inflection Point is very often denial"***

## Let Chaos Reign

So these are some of the elements of how to determine whether what you are dealing with is a Strategic Inflection Point. Suppose you are in one. I have found it useful to break this Strategic Inflection Point process into two phases.

The first half is the phase in which it is best to Let Chaos Reign. When danger comes, the adrenaline starts flowing and you want to pull the reins in and take control. But the opposite is what is needed. The reason you need to do the opposite is that, in this phase of the curve, you do not know enough to take charge. The fragmented information will come with fragmented suggested directions. You let things develop, and the way you let things develop is to relinquish control and let people - division heads, geography heads, engineers - pull in various directions. I mentioned earlier the incident at Intel where we could not make up our minds about RISC versus conventional architecture. At first it was fine for us to let engineers experiment and pull us in different directions, because that was the only we could get enough information to really build up a basis on which to decide whether to go for one option or the other. So it was not a mistake that we let chaos reign - to begin with.

This phase involves going through stages like the stages of dealing with human disasters and tragedies. The first phase of organisational reaction to a Strategic Inflection Point is very often denial, in exactly the same way as it is for human beings. There is a very obvious reason for this. Just as you do not want to hear bad news from your subordinates, you do not want to face a situation whose consequences are very onerous on your organisation. In fact, as the whole framework of your business changes, you have to take some momentously difficult steps - you have to get out of your comfort zone and tear up your organisation. You do not want to deal with this prospect: your tendency is to disbelieve and deny. Moreover, there is nothing you can do about these reactions: they are completely natural; every organisation wants to perpetuate its successful past. But one thing you can learn from it is that the more vociferously you deny it the more suspicious you ought to be of your own or your colleagues' motives. There seems to be a tendency that the bigger the danger of the change, the more you deny it; and the more you deny it, the more you hang in for too long with the old way of operating.

## Strategic Dissonance

I use the phrase "Strategic Dissonance" to describe the second stage of passing through a Strategic Inflection Point. Strategic Dissonance is a very interesting phenomenon that happens later. After the denial stage and the experimental stage people start to change the direction of the company: the key point is that this happens while the *stated* direction of the company remains unchanged. The biggest transformation Strategic Inflection Point that Intel went through was a little over ten years ago when it changed from what it had been for its first fifteen years: a memory producer. It got out of the memory business and threw itself wholly into building microprocessors.

Eleven years later one does not quite understand what all the fuss was about. But in 1985 this was a big deal, because our whole company's mentality was about memories. That is what we started with: it was our function, our charter, our mission - what God put us on this earth to do. It so happens, however, that for the years preceding that point we had been beaten out of the memory business by the Japanese producers - a bit at a time. How were we beaten out? We were beaten out by price competition. The financial types and the production planners in the company were gradually responding to a horrible margin in the memory business and the better margins in the microprocessor business. Little by little they were allocating our production capacities away from memories into microprocessors. The more they did that, the less important we were in memories, and the less exposed. The change was very gradual. After two years we finally got a position where only one eighth of the production capacity of the company was dedicated to memory production. But if you had asked people in the company, particularly *management*, what we were about, we would have recited "we are the world's premier memory producer": a mantra unquestioned. So there was a growing dissonance between what the company actually did in the hands of middle-level managers, without any fanfare, unit of production by unit of production, and what the company said we were doing. When you are dealing with an organisation, where what they actually do and what they say they do becomes more than usually divergent, that Strategic Dissonance is a very strong sign of the early stage of a Strategic Inflection Point. And it very definitely requires management action.

### The Business Bubble

The last point I want to make about the passage of Strategic Inflection Points concerns what I call the Business Bubble. In an ideal world, if you have a good business which you understand but which is going to go away - to begin its decline on the Strategic Inflection Point curve - you should act and re-position the company when the going is at its best. This is because the protective bubble of the existing business is still healthy. Almost nobody does that: they wait until the signs of an Inflection Point are incontrovertible, and they only become incontrovertible after the decline has gone so far that nobody can question it.

It would be interesting to take a look at the coincidence of announcements of lay-offs, re-structuring and the like and how closely they follow announcements of losses. All companies have financial systems. They do not need to announce that "this quarter" or "this year" they suffered such deep losses that the next day they have to announce lay-offs. They could have had these lay-offs six or nine months earlier, when it was quite clear from the financial forecast that they were going to lose money. But none of us take such a step very lightly: none of us *dare* to take such a step very lightly. So we want the proof, we want the actual final results. And once we have the proof that we really did lose that much money, only then do we sanction lay-offs. That is clearly not in the interest of either the employees, or the company or the financial shareholders. But that is how we operate - neglecting the Business Bubble.

> ***"Rhetoric, even if it is clear rhetoric, will only go so far"***

### Rein in Chaos

At last you have got through the Strategic Inflection Point. You have figured out you are going to be a microprocessor maker, that you are going to use the conventional architecture, put all your resources into it. In this second phase it is time to Rein in Chaos. The phase for experimentation is over. Now is the moment to pull the reins in and to take charge again. You now know (or think you know) enough to see the other side of this Valley of Death that you are going through that you call the Strategic Inflection Point.

At this point you must be completely explicit in stating the direction of the new business. When you get out of pursuing multiple architecture, you must be completely explicit that the experiment is stopping, that all the resources are being put into one option - that we are getting out of the memory business and are going to be the microprocessor company. No ifs or buts: explicit clarity. My personal inclination is to fudge because these changes are controversial and we tend to hedge our bets. At least I tend to fudge in the rhetoric in order not to have to get into argument over every phrase. But self-discipline is essential, because clarity is essential to move the organisation along with us in the new direction.

### Walking the Walk

Top management must also lead via strategic actions. Rhetoric, even if it is clear rhetoric, will go only so far. The most important way you can lead an organisation is by walking the walk, not just talking the talk. The most visible way that you in management can symbolise new direction is via your calendar. What you spend your time doing is very evident through the entire organisation. And what you spend your time doing has more credibility as a method of setting priorities than any speech, no matter how clear or articulate.

How you allocate your time is a strategic management tool, probably the most important strategic management tool you have at your disposal as a manager. Be very conscious of that, and do not under any circumstances let tradition get in the way. In my book *Only the Paranoid Survive*, I illustrate this point with a week's diary of a CEO of a major company which is in the middle of a horrendous crisis. If you look at what this person is spending his time with, you would never think that the company is in crisis; you would never guess that he wants to communicate that his company is in crisis. In a whole week he does not see one customer. He spends the week holed up in discussion with his management. The precise details which surround this story, which for diplomatic reasons I have not spelt out, are horrifying. That is obviously an extreme example - but all of us are guilty to some extent of fudging our strategic actions by our calendar allocations.

I want to end with a comment which moves away from companies. Strategic Inflection Points as I describe them here are things that happen to businesses. But they also happen to each of us as individuals. In a way we can look at our careers as businesses. Our own careers have a strategic trajectory. We manage them, we redeploy resources, we operate in an environment that impinges on them. We face changes in that environment which involve forces becoming ten times as strong and maybe causing Strategic Inflection Points for us as individuals. This means that you have to ask yourself whether people in your organisation are prepared for Strategic Inflection Points. Can individuals in your organisation manage their careers? Can you help them manage their careers? What does it mean when you have an overlay of policy in a company that is undertaking a Strategic Inflection Point à la Wal-Mart that simply prevents them from continuing with historical staffing levels.

Globalisation is relevant here. For me, the word globalisation first and foremost means that whereas in the past you competed with other businesses in your immediate vicinity and then you competed with businesses on a national scale, now you compete around the world with everybody else everywhere. That means that whatever work you do, there are other people on the other side of the world that do the same kind of work: they compete with you person by person, company by company. You put your job at risk if you lose in that competition.

Globalisation is an opportunity; and globalisation is a threat. Understanding that it can cut two ways, reconciling the two, and creating an environment in which your employees will run their own careers and manage the strategies of their own careers with full recognition of the harsh truths behind some of these benign clichés of our business life - this is very important. In the same way in which managers want to understand the environment in which they run their careers, so I think it is their responsibility to help the people that they are responsible for. You, the managers, must make sure your employees understand the truths of their environment to the maximum possible extent. Only in that informed state can they in turn manage their careers and be ready for whatever Strategic Inflection Point they will face.

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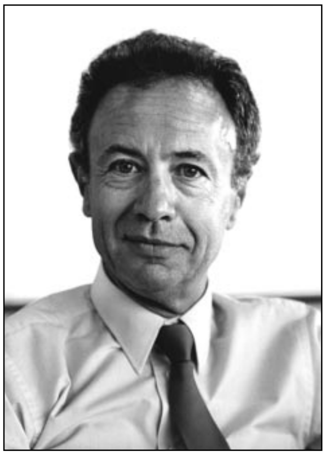

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