INTRODUCTION

The title of my remarks is: "A Perspective on Managing in the 1990s." A clear understanding of that perspective, however, requires an equally clear understanding of the change taking place in Corporate America. So I want to begin by briefly discussing that change.

Read the business section of a newspaper or magazine and there's a good chance you'll come across the words "restructure" and "downsize."

Twenty-five years ago neither word was listed in Webster's Seventh New Collegiate Dictionary. Five years ago both words were listed, with "downsize" defined this way: "To make in a smaller size...downsize automobiles."

These days instead of automobiles, a far more likely example would be corporations. And the definition might read: "To narrow the focus of an organization's activity. To make leaner and more competitive."
In a recent survey of some 600 American CEOs, nearly 39 percent said their companies had "downsized" in the past two years. Thirty-five percent of these same executives intend to do more downsizing in the next two years.

It has been estimated that downsizing and restructuring have eliminated more than 1.5 million professional and managerial positions at U.S. companies since 1979.

Control Data has certainly experienced the kind of change those figures imply. Restructuring has meant a reduction in the size of the full-time employee population from nearly 61,000 in January 1982 to 34,500 at the beginning of this year. It has resulted in fewer levels of management, with up to five levels having been removed over the past two years. The levels now range from four to eight across the Company. Meanwhile, the employee-manager ratio has increased from 6.6 in 1982 to nine employees per manager today.

The numbers may vary from company to company but they all add up to the same thing: American corporations are getting leaner and more responsive to change. And world competition being what it is, U.S. companies must become even more so to survive.
Peter Drucker -- the management consultant -- sized up the situation in a recent Harvard Business Review article. Drucker wrote:

"The typical large business 20 years hence will have fewer than half the levels of management of its counterpart today, and no more than a third the managers.

"In its structure, and in its management problems and concerns, it will bear little resemblance to the typical manufacturing company, circa 1950, which our textbooks still consider the norm. Instead it is far more likely to resemble organizations that neither the practicing manager nor the management scholar pays much attention to today: the hospital, the university, the symphony orchestra. For like them, the typical business will be knowledge-based, an organization composed largely of specialists who direct and discipline their own performance through organized feedback from customers, colleagues, and headquarters."

I find the analogy of the corporation to a symphony orchestra particularly interesting. Although, in the case of my own company, I think the better metaphor would be a jazz ensemble.
FIVE PRINCIPLES TO MANAGE BY

There are five management principles that have guided me over the years. They have been particularly helpful as guideposts through Control Data's turbulent change of the past few years. I'd like to share these principles with you and then relate them directly to what we're doing at Control Data and the sort of change, which I have noted, that faces U.S. industry.

The first principle has to do with motivation. Why should a person want to manage? What is the reward? Baseball Hall-of-Famer Yogi Berra once said, "You got to be very careful if you don't know where you're going, because you might not get there."

That statement is especially true for anyone going into management. You should know exactly what your objective is. And, yet, too many people just stumble into management. They don't really know what their objective is when they set out to become a manager or a top executive.

Well, the answer is straightforward: The true reward of management is accomplishing complex tasks through the success of others. Once you have experienced that feeling, nothing else in business will ever bring you complete satisfaction. If your prime goals are personal recognition or riches, there are better and easier paths to take.
I might add that management is both complex and ever-changing. So it offers both great intellectual challenge and variety. Likewise it offers the opportunity to work with others in the most rewarding way. That is to simultaneously learn from and teach others, to stimulate and be stimulated by others. Openness and a desire to learn are fundamental to a manager's success -- and realizing its rewards.

The second principle is: Develop your own style...learn from everyone, imitate none. Success in this development depends more than anything on remembering that your first obligation is to provide an environment that will enable your subordinates to realize their full potential. And fitting your own strengths and weaknesses to that purpose.

The third principle concerns challenge. A manager's greatest challenge is to encourage risk-taking change agents. This is particularly difficult in large organizations. The responsibility for and importance of this grows greater with the higher level of management. Innovation is not in the character of large organizations. It must be consciously induced and separately nurtured or it will be smothered and eliminated by the organization.
More often than not, the people who are most innovative have characteristics that make them unappealing to the organization at large. Indeed, they frequently work at cross-purposes to the objectives of the organization so the management job in this regard demands an excellent sense of balance. One thing the manager must remember is this: while most innovators are mavericks, most mavericks are not innovators.

The word innovation, by the way, has a semantic halo effect that results in the association of innovation with the creation of some wonderfully new and different product or service. But the management task with respect to innovation is both more mundane and more profound than that.

What it amounts to is this: a manager must inculcate in the work group the concept of continuous improvement -- change -- in every work process. Said more simply, it's the "There's gotta be a better way" mind-set. So embracing change in the work group is the single greatest challenge of management today and for the future.

The fourth principle is that of management responsibility.

In the 1970s there was a running debate as to whether the purpose of a business enterprise was simply profits or encompassed a larger set of "social responsibilities."
In recent years this debate has become more narrow and has taken the form of whether the corporate responsibility is solely to the shareholder -- more explicitly to shareholder value -- or to a broader group called stakeholders -- customers, employees, shareholders, and the communities in which the Company operates.

Unfortunately, the debate is most often set forth in terms of invective and rationalization rather than insight and rationale. So there's nothing to be gained from reciting the familiar arguments. The motivation underlying the whole issue, however, is a desire for instant gratification not dissimilar to that which invaded the economic structure of Great Britain in the latter half of the 19th Century, and ultimately stripped that country of its economic prowess. This is clearly ominous for the future of U.S. world leadership.

At the root of all this is a failure to understand the difference between "creating value" and "realizing value." Indeed, the misunderstanding is so profound that people continually refer to the process of realizing stockholder value as "creating stockholder value."

"Creating value" or "creating wealth" (and I'll use the terms interchangeably) means building competitively advantaged businesses and, over time, generate superior financial performance. Creating wealth is a relatively long-term process.
"Realizing wealth" means to rearrange, or broker a portfolio of businesses or properties so that the underlying values become more immediately evident. In the case of publicly-owned companies, this leads to a higher stock price. Realizing wealth is a relatively short-term process.

Clearly a business and its managers have the responsibility to both create wealth and realize wealth for its stockholders. And I assure you that while realizing wealth primarily involves analysis and paper, creating wealth is much tougher, and is impossible without an intense focus on customers and employees.

Furthermore, social change can just as surely threaten business as can technological change or change in its financial health.

The challenge to the manager is to correctly sense and appraise the environment and its changes and establish strategies to both create wealth and realize wealth. Without exception, change will present market opportunity. The degree of health of the organization in its multiple dimensions -- stockholders, employees, customer base and community relations -- determines its ability to grasp those opportunities.

The fifth, and last, principle involves the personal resources of managers. The managerial job is physically, emotionally, and mentally demanding. Poor husbandry of those personal resources will ultimately result in failure.
Timeframes in management tend to be extended. The results of missed opportunity or lack of vigor are seldom immediately apparent. A sense of urgency is fundamental. And yet a proper sense of urgency is not possible for people who are physically debilitated, mentally dulled, or emotionally unstable.

The management job demands perspective. Perspective can only come from experiences -- as many experiences as you can cram into a day. Reading is the only shortcut to actual experience available. It is simply a way to share the experiences of others, and therefore it is highly leveraged in this matter of gaining perspective. Even so there is a caveat. And that is: always try to learn from what you read, but don't always believe what you read.

Today we have the potential for another shortcut, and that is computer simulation. Although computer simulation of physical processes is an everyday affair, computer simulation of managerial experiences is rudimentary at best, and very rare in any event. So at this point unfortunately it remains only potential.

These personal resources -- intellect, emotion and health -- are highly interdependent. Intellectual achievement and mental alertness are impossible with a sluggish body. Mental confusion and distress leads to physical deterioration. And disorganization of time use can induce pathological states in either body or mind.
Those, then, are the five principles that have helped me as a manager and executive. I have thus far discussed them in the abstract, but let's look now at the principles in practice.

THE PRINCIPLES IN ACTION

In 1985 Control Data lost $567.5 million. The Company's liquidity was so bad that U.S. lenders refused to advance additional funds, forcing the Company into default on its domestic debt. The imminent demise of Control Data was routinely predicted in the media.

In December 1985, someone gave me a bumper sticker that pretty well summed things up: "It's been Monday all year."

In that setting, a month later in January 1986, I became the Company's board chairman and chief executive officer.

No manager, no leader, could ask for a greater prospect of reward than to enable the people of Control Data to overcome the problems and their fears in that winter of 1985-1986.

So principle number one was operating in full force. The challenge and the excitement for me are difficult to describe. I kept that bumper sticker on my desk throughout 1986 to remind myself that 1985 was an experience the people of Control Data did not ever want to repeat.
There were two major problems evident in the Company: overdiversification and overcentralization. What was not so evident was those aspects of the Company's culture which had given rise to the problems. The problems themselves could be attacked rather expeditiously. But the underlying causes likewise had to be fixed if we were to have permanent change and improvement. This, by the way, was in no way made easier by the fact that I was part of the culture.

The task of addressing overdiversification was both an opportunity and a challenge. Doing so related directly to principle number four -- that of responsibility. We clearly were in imbalance -- busily creating wealth in myriad different businesses and with insufficient regard to the resources required. At the same time we had been paying scant attention to realizing wealth for those -- our shareholders -- upon whom we depended for much of the required resource.

We had to do less and do it better. We narrowed the Company's focus to those businesses we felt to be most competitively advantaged -- at least within the bounds of reasonable time horizons and financial resources. Some 20 businesses or product lines were sold. We raised $1.3B through the sale of assets and another $400M through public financing. All the bank debt was paid by mid-1986 and the stock price rose from 16 5/8 in November, 1985 to 38 1/4 in early October last year. The average over last week was about 25.
Through all this period, however, we never lost sight of the concommitent need to continue to "create wealth" by devising new products and services. Some were relatively short-term efforts — we introduced 17 new leading edge disk drive products by the end of 1987. Some were longer term — we continued to expend some $50 million a year in developing a new supercomputer when the supercomputer operation was not expected to break even until 1989.

A firm focus on the principle of responsibility -- to several constituencies -- and on the need for balance in both creating and realizing wealth made the job of dealing with overdiversification straightforward, although by no means easy.

Overcentralization was another matter -- it was far more subtle and cultural in nature.

Over the years, there had evolved within Control Data a "looking to the center" mentality. "In many parts of the Company," I once remarked, "We have the best 'problem definers' in the world." They could lay out the problem beautifully -- and then they sat back and waited for the boss' answer.

This looking to the center culture was exacerbated by a transactional control type of operation. In other words, control was accomplished by approving individual transactions as opposed to control by establishing strategy and standards and measuring adherence to them.
Ironically, this was not because Bill Norris, the founder, insisted on absolute central control. It was the opposite. He encouraged people to be innovative. Indeed, staff people — as well as product designers — were given free reign to be creative. The unfortunate result was a large structure of policy practice, and people to support the implementation of all this staff creativity. And, regardless of what the policy said, people "looked to the center" for guidance in things both large and small.

Decentralization of Control Data has, of course, involved many mechanical things -- policy changes, corporate staff reductions, procedural changes, changes in executives, and so on. But underlying all that is cultural change.

On becoming CEO I articulated three values -- three commitments -- which were to be the foundation of Control Data's managerial style and its organizational culture:

Marketing -- we will respond creatively to customer's current and future needs.

Quality -- we will meet customer's expectations for value and service.

People -- we will practice a management philosophy that empowers the people of Control Data to reach their full potential.
These values, these commitments, represent a method of management. They derive directly from the second and third management principles I outlined earlier. The second principle being that of developing your own management style, based on your obligation to help people realize their potential; and the third is that of meeting the challenge to encourage innovation -- to inculcate the concept of continuous improvement in every work process.

The word "marketing" means many things to many people. We have defined it this way: Marketing is a system of management that produces an in-depth understanding of what you must do to help make your customers successful. It includes, as well, the processes necessary to assure the successful implementation of that understanding. By focusing on customer success -- their needs and requirements to achieve success -- you, yourself, can gain competitive advantage and success.

Quality also has been defined many ways. But the most effective definition and the one we use at Control Data is: conformance to customer expectations.

At Control Data, the drive for quality is embodied in what we call TQMP -- Total Quality Management Process. TQMP embraces three concepts: 1) Quality can and must be managed; 2) Everyone has a customer; 3) Processes are the problem, not people. (What TQMP really comes down to is that "there's gotta be a better way" mindset.)
Critical to this approach to quality is the concept of empowerment -- enabling individuals to achieve their full potential and, at the same time, accept accountability for their work product. That, as I've already pointed out, is the basic objective of an effective management style. At Control Data we want people to be able to say these six words to themselves: "What I think and do matters."

Let me expand on this matter of empowerment a bit further.

Successful managers are able to produce gut-level motivation without resorting to exploitation. Fear of failure ... fear of competitors ... plain old discomfort and concern -- all are powerful motivators. They are as useful in the management job as reward. Exploitation, on the other hand, is to exercise insecurities to the detriment of the person being managed. It's surprising how many managers cannot recognize the difference.

Fundamental to this differentiation are accountability, consistency and criticism.

**Accountability** will produce self-improvement, self-motivation and self-discipline. Any tyrant can induce "sweaty palms" but managerial leadership induces self-discipline and accountability.
Consistency derives primarily from a strong set of personal beliefs and a sense of fairness. A manager's beliefs must be based on mental hard work -- studying, understanding, forming opinions and developing reference points.

Being fair means to hear things out. It also means not to exploit one person to the benefit of another. But most important in the relationship between a manager and a subordinate is the willingness to listen...and possessing the knowledge to be able to explore together problems and solutions. Fairness demands that a manager have strong opinions. There must be a willingness to change but no propensity to do so. Above all, fairness does not mean to be accommodating or to have jelly beans for everybody.

The concept of people empowerment also has a dimension of particular importance as we approach the 1990s. That is the challenge of providing advanced opportunity to women, minorities and immigrants.

The statistics are compelling.

Women, minorities and immigrants currently make up 53 percent of the American workforce. That number will increase significantly. According to the Hudson Institute, those three groups will account for approximately 85 percent of the net number of new workers between now and the year 2000. Women alone will account for 64 percent of those new workers.
The flip side of these figures is perhaps most vital. The native white male now constitutes 47 percent of the workforce. Between now and the year 2000, native white males will make up only 15 percent of the net additions to the workforce.

The message in these numbers for management can be summed up in one word: Opportunity. If managers don't use that opportunity to make sure that these people fully develop their abilities, there's going to be a huge gap between the needs of American business and available human resources required for its continued success.

CONCLUSION

As you can see, there are elements of the five management principles throughout Control Data's basic commitments to Marketing, Quality and People.

I vividly remember when I first articulated the principles for myself. I was on an airplane reading a book on management principles when I decided to write down my own thoughts. I still have the original notes.

About once a year I get them out and test them against a recent experience. I can say they have served me well.
As I was reading them in preparation for today, I came across a statement on leadership and General George C. Marshall, America's chief of staff in World War II and the architect of Europe's postwar economic recovery plan -- the Marshall Plan, as it became known.

Here's what I wrote: "General Marshall was in the context of his culture and background, the ultimate leader. He was stronger and tougher than Eisenhower. He was more rational and considerate than Patton. Above all, he was not driven by ego-mania as was MacArthur. He was as smart as any of them. But his single greatest attribute was . . . self-discipline."

In thinking about this statement, I recalled a story about Marshall when he was a second lieutenant stationed in the Philippines. There wasn't much for him to do at the time so he decided to work on improving his mechanical aptitude, which was lousy. He got an old truck and every afternoon he made himself take the engine apart and put it back together again. He did this until he overcame that particular weakness in himself. This was indicative of the leader he was to become, dealing with himself and others.
Few people can match General Marshall's greatness. But we can follow the example of his management skill and self-discipline as we go about our tasks. The success of our orchestra will bring us success as conductors, and help make beautiful music for everybody -- customers, employees, communities and, most especially, stockholders.

Thank you.