I. INTRODUCTION

Thank you, Rhonda. It's always a pleasure to return home to North Carolina and Duke University. I visit the Fuqua School of Business so often that sometimes I feel like a student. Come to think of it, that's not all bad.

It's truly a privilege to be the keynote speaker at an event such as this. The members of the International Business Club are to be commended for bringing together a distinguished group of speakers to address a question which is even more fundamental to our future than it appears at first glance: *An Asian Trading Block Led by Japan: Opportunity or Threat?*

In thinking about that question, I was reminded of the phrase -- *Seeing The Elephant*. That's a phrase that came into the American vocabulary in the mid-nineteenth century in the days of the expanding Western Frontier. It's a phrase not many people use any more, but still, on hearing it, most people intuitively grasp its meaning.

Out there in the "Great American Desert", as the plains were then called, weeks and weeks from the last outpost of civilization, with a great unknown ahead, the enormity and seeming hopelessness of what one faced became overwhelmingly real. Many despaired. Some gave up. One chronicler of the era, George Kendall, wrote "Where a man is disappointed [in what] he undertakes, when he has [had] enough .... he has 'seen the elephant'."

For the settlers of the American West, *"The Elephant"* represented fear of the unknown, of an unfathomable vastness, of death.

Certainly, *Seeing the Elephant* is an appropriate metaphor for the emotions that grip much of American business as they face the prospect of a vast Asian trading block led by Japan.
Such a trading block in fact is a very real threat to the economic well-being of the United States. But it is also an opportunity. So the actual subject which you will discuss tomorrow will be “An Asian Trading Block Led by Japan -- Opportunity and Threat.” It really depends on what we do now that we are facing "The Elephant".

II. THE THREAT AND ITS CHALLENGES

Let me briefly discuss some dimensions of the threat.

As Joseph Nye pointed out in a recent WSJ article, much of the concern in the U.S. arises not just from current economic and trade statistics, but from the tremendous rate of change -- Japan’s rate of growth -- over the past forty years.

In 1950, he points out, Japan’s economy was one-twentieth the size of the American economy. Today, Japan is the second largest economy in the world, the second largest exporter of manufactured goods, the world’s largest creditor. It is the second largest contributor to the U.N. budget, the largest dispenser of foreign aid and is pressing for a larger voice in international financial institutions.

At the core of this growth is an ability to manage and use technology to create superior products and services that dominate chosen markets. And underpinning that capability is an education system that turns out more engineers than does the U.S. though its population is slightly more than half the size of ours. [Japan, with a population of 123 million, has 73,600 engineers; the U.S. with a population of 243 million, has 67,400 engineers].

Lower cost of capital helps to fund Japan’s utilization of technology. Compared to the Japanese, U.S. capital costs have been twice as high in recent years. As a result, Japanese companies have been able to invest more heavily in new technologies that improve their productivity and the cost-competitiveness of their products. Lower cost of capital helps to reinforce a longer-term view in business strategies.
And, of course, the Asian elephant we see is more than Japan. Korea, Taiwan, and Singapore are receiving much attention -- and deservedly so. The majority of the magnetic disk storage drives used in the world’s computers are made in S.E. Asia -- and no longer can that be dismissed as simply a matter of cheap labor. The labor content of a disk drive is less than one-tenth of its total cost.

The potential of China at once glitters tantalizingly and threatens or frustrates enigmatically.

And, then, there’s Malaysia. In 1990, Malaysia was the fastest growing economy in Asia, and perhaps the world -- an estimated 9.2 percent. In fact, Penang Island, where much of Malaysia’s technological growth is occurring, is now known as Silicon Island.

A well-educated and ambitious population underpins such growth in today’s world. To illustrate this point, let me share an experience I had last November after speaking at the World Productivity Congress in Kuala Lumpur, Malaysia. On the way to the Kuala Lumpur airport, I mentioned to my taxi driver how impressed I was with the vitality of the country’s economy. This prompted the driver to discuss fundamental economic issues -- the growth in GNP, the fact that Malaysia was still too much a commodity nation and did not have enough value-added capabilities to enable the wealth to be as well distributed as it should be. I mentioned I had visited with the Palm Oil Promotion Council. He went on to observe that palm oil, of which Malaysia is the world’s leading producer, has been unjustifiably maligned in the U.S. as a major source of cholesterol-related heart disease. In fact, my friendly taxi driver pointed out that palm oil is a natural source of the antioxidant vitamin E constituent, tocotrienol, which can raise LDL. Again, this was my taxi driver talking!

In short, what we are seeing in Malaysia and other parts of Asia is unprecedented change. Change that produced the world’s most dynamic economic growth in the 1980’s -- an average increase of 7.5 percent. Led by Japan, Asia produces almost a fifth of the world’s national product and accounts for 18 percent of world trade.
Any great change is both an opportunity and a threat. And this one is particularly vital to our future. Unfortunately, it's more likely to be a threat than an opportunity -- not because of Asia itself, but because a successful, more mature economy like we have in this country typically does not respond creatively and forcefully to change.

III. MAKING THE THREAT AN OPPORTUNITY

The key to turning the threat of an Asian trading block into an opportunity is improving the productivity -- the competitiveness -- of American industry.

Six years ago last month a blue-ribbon commission appointed by then-President Reagan concluded that Americans could "no longer afford to ignore the competitive consequences of our actions -- or our inaction."

The report set off a flurry of activity. "Competitiveness" became the obligatory catch word for whatever issue, initiative or idiosyncrasy was being put before national policy makers or corporate management.

In 1986 alone, some 5,000 bills were introduced in Congress to address the problem. Obviously there has been a great deal of irrelevant rhetoric and legislation. Still, for the first time, some fundamentals of the productivity/competitiveness issue have been addressed.

In this conference you have the opportunity to explore these fundamentals. There are three of them: quality, education and technology. Cost of capital, as I mentioned a moment ago, is also certainly a factor. But preoccupation with it tends to obscure the more basic factors of quality, education and technology.

Consider the first fundamental -- quality. It may well be the most basic problem facing American management today. In most U.S. companies, the principles of Total Quality Management (TQM) are still not integrated into the mainstream management processes of strategy formulation and day-to-day operations. Quality continues to be "a program" too dependent on heroes and missionaries -- who often, once they have achieved their immediate goals, move on to something else. In short, the question is: Have we crossed a watershed or is TQM just the current business fad?
A step in the right direction is the Malcolm Baldrige National Quality Award. Since it was initiated in 1988, the Baldrige Award has become a standard of excellence for quality improvement in the U.S. Winning it signifies that a company’s products or services are among the world’s best -- an honor that boosts employee morale, improves productivity and enhances a company’s reputation among customers and shareholders.

However, in a country as large and diversified as ours, a national recognition program is not enough. A consistent yet flexible hierarchy of quality programs must be put in place. There are some encouraging signs that this is occurring at the state level. Several states, including Minnesota, California, Ohio and most recently, New York, have created statewide prizes patterned after the Baldrige Award.

These state-level programs are particularly important because more attention needs to be focused on smaller companies. To date, a great deal of the quality focus has been in large companies. State-level quality organizations, such as the Minnesota Council for Quality through its programs and activities, can help small business understand and implement the concepts of TQM.

Finally, by having company-level quality award programs based on Baldrige principals, the hierarchy is completed. A number of U.S. companies, including Control Data, have already introduced such programs.

Quality, however, depends on far more than recognition programs.

To consistently improve quality requires management to embrace and personally practice the concept of TQM. Total Quality Management is a comprehensive philosophy of managing resources -- particularly, human resources -- that to be effective must be integrated into all the day-to-day processes of an enterprise. TQM principles and practices are an integral part of the creation of business strategy, of the processes involved in designing and building products and services, and of marketing and delivering those products and services.
Dr. Deming was here last week and I'm sure he told you in no uncertain terms what can and should be done regarding Total Quality Management. I know from personal experience that change can occur in an organization. But I also know how much more extensive the change must be if we are to make real the opportunity that is in Asia, not to mention the rest of the world.

The second fundamental to improving U.S. competitiveness is education.

America's education crisis has been widely discussed. There is no need for me to add to the mountain of statistical rhetoric in that regard.

I should also note that there certainly is no lack of proposals to deal with the crisis. They cover the gamut of pedagogical, structural, financial and political solutions. Many of these proposals have merit. Some, of course, are the sort of froth generated by any great turbulence.

The only point I want to emphasize tonight -- and I believe it is one that is not widely nor adequately understood -- is that the fundamental characteristic which must be dealt with in the U.S. system of education is diversity. Cultural, economic, sociological, racial, geographical diversity in the U.S. is enormous. The U.S. Census recognizes 250,000 distinct groups of people. Despite this incredible diversity, the basic curriculum of our education system takes a "one size fits all" approach. Consumer product manufacturers and retailers have long since adapted to this diversity. It is, then, all the more ironic that we don't view ourselves that way in terms of its implications for something as basic as education.

In his book, The New Capitalism, author William Halal predicts: "... it will not be long before each person should have a complete medical history stored electronically to create a living model of the unique way their body behaves."

The technology exists today to "store electronically" and, more importantly to help the teacher utilize a complete learning profile for each individual in order to realize an individual's potential. It simply requires the education leadership to put it in place and use it.
We have for the first time a set of national education goals -- established by President Bush and the state governors in 1989. At the same time, The Business Roundtable set up a task force to support pre-college education restructuring.

The Business Roundtable initiative is significant because it, first of all, recognizes the diversity issue. The Business Roundtable efforts themselves are structured on a decentralized state level basis. Each Business Roundtable company and CEO has made a ten-year commitment to work with state political and education leaders for reform. I'm personally involved with these efforts in Minnesota and New Mexico.

With the encouragement of business, education leaders who take an outcome-based approach to education reform now have a much stronger voice. Outcome-based management is important in dealing with the diversity issue.

However, the real key to dealing with diversity is technology. Computer and communication technology today for the first time provide teachers and administrators with the wherewithal to deal effectively and economically with the tremendous range of student diversity they face. The question is, will they?

The next five years will tell how well we grasp the opportunity now before us in education.

As to the role of the third fundamental -- technology -- in increasing productivity/competitiveness, there are a few signs in national policy of awareness of its pervasive importance. For example, the benefits of collaboration are evidenced for the first time in public policy by the 1984 Cooperative R&D Act. There's also a realization that "balance of trade" in technology is equally important to balance of trade in monetary terms -- and in fact of course technology flow is more basic to long-term economic well-being. The 1988 Trade Act, for example, provides "equitable access to technology" as a basic policy goal. Another encouraging sign is the recognition that technology is crucial to economic health and that, in assuring national security in the large sense, attention must be given to technology in that light as well as to its military role. This is reflected in changes to U.S. export control policy three times in the last five years.
All these developments are good and indicate a growing willingness to take meaningful and serious action at a national policy level. Unfortunately the 1970's and early 80's were the crucial years during which far-seeing and innovative government policies would have been highly leveraged with regard to today's competitiveness posture and productivity levels. Nothing can be done about that now. It's catch-up time.

In technology, we are faced with both macro and micro issues.

At the macro level, when there has been leadership from the private sector, the U.S. government has shown a willingness to adopt legislation which deals with specific sectors of technology. For example, one crucial area of technology -- high-performance computing -- was comprehensively addressed last year in Senate Bill 1976.

But a more fundamental failure is at the micro level -- that is, in terms of technology management within the individual enterprise.

The problems here are deeply ingrained in the corporate culture of U.S. companies. This culture has become increasingly preoccupied with "realizing wealth" as opposed to "creating wealth". In fact, our understanding is so twisted that the media normally refers to "creating stockholder wealth" when in fact they are talking about "realizing stockholder wealth". Creating wealth means to create assets -- products and services and new markets -- of value. Realizing wealth of course is simply a matter of making those assets more liquid -- by increasing the value of the equities which represent them, by trading or redistributing them for something of realizable value, or by turning them into cash.

A society whose preoccupation is with realizing wealth is on a long-term road to becoming a second rate economy -- as witnessed by Great Britain after the middle of the 19th Century.

At its root, the challenge of creating wealth is a matter of the successful management and utilization of technology (MUT). Although this has long been recognized by many thoughtful people, MUT has not attained the status of a recognized discipline.
MUT links engineering, science and management disciplines to address the planning, development and implementation of technological capabilities to shape and accomplish the strategic and operational objectives of an organization.

MUT is not a part of most corporate management development programs. In fact, corporate leaders in general would not see any real difference between MUT and management in general. Academics for the most part are likewise skeptical and believe that research and education in traditional disciplines will suffice.

The elephant we see in Asia should be adequate evidence that this is not true. There exists knowledge and experience in successful MUT and the task before us is to codify and build on it.

One aspect of MUT, technological cooperation, deserves special note.

Cooperative ventures in technology development between companies and between government and private enterprises is not, as some would believe, an anathema to competitiveness or to a market economy. Rather, it is a recognition of the economies of the scale, the complexity and the risks associated with the expanding horizons of our technological needs.

In a 1987 paper on the Globalization of Technology, Dr. Simon Ramo has stated the problem this way: "With the rapid advance of technology becoming a worldwide phenomenon, no one company, not even the largest, can hope to originate more than a small fraction of the evolving technology that will be key to preserving its position."

Basically, we still practice 19th Century technology management which was essentially defensive in nature. In such a strategy one develops and protects a technological superiority and bases competitiveness on it.

A positive technology management understands the hierarchy of value-added between basic technology and ultimate customer need. In such an approach, one exploits a technological superiority to gain access to an augmenting or follow-on technology.
This concept and practice was the basis on which Control Data built a billion dollar disk drive business. Likewise, it was through a large business, small business, government cooperation that the first supercomputers were built. In 1983, I was involved in establishing the Microelectronics and Computer Technology Company (MCC) and worked for the passage of the National Cooperative Research Act of 1984. More than 150 other consortia have come into being as a result of this Act. But all that is only humble beginnings of what’s possible and needs to be done.

Intriguingly, Japan actually offers an enormous opportunity for the U.S. to gain back competitiveness through technological cooperation. Unfortunately, to date, we have approached such endeavors with trepidation and a poor understanding of the fundamentals of cooperation. As a result, we have been losers rather than the winners which we could be.

CONCLUSION

Overall, then, we have made some progress toward adopting the policies and management practices needed to be more competitive on a global scale. But are we doing so fast enough and fundamental enough to make a difference in America’s future? Can our leadership -- business, government and academia -- pull together and respond creatively to the challenges?

The elephant we face as we look West is no less daunting, no less real, than that “seen” by our predecessors more than a century ago. So what happens now? Do we have the imagination and determination that are called for? Now that we’ve seen "The Elephant", are we willing to take the necessary risks? Let me propose three priorities where we can begin immediately to show these qualities:

First, we must establish Total Quality Mgmt. as the basic tenet, the core management philosophy from which all management practices derive. That is a task of many dimensions. Not the least of those is the integration of TQM concepts across the entire curriculum of Schools of Business.
Second, we must recognize that successful management and utilization of technology is key to long-term competitiveness and creating wealth, and that technological cooperation is a basic mechanism for coping with the exponentially escalating cost and complexity of technology. The problem is the large sea of managerial ignorance in technology management. It is in this regard that Schools of Business in both their research and education programs can play a leadership role.

Third, at the root of it all must be an education system that not only accommodates, but actually capitalizes on, America’s great diversity. Business has more than an obligation. It has a vital requirement, to help bring such a system into reality. We’re not talking philanthropy here -- although that’s important too. We’re talking individual participation and leadership on the part of all business executives.

With resourcefulness and determination in pursuing these priorities, we like those westward venturers before us, can face “The Elephant” and turn threat into opportunity.