

7 The Knowledge Economy and Corporate Globalism

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About a year ago, two very strong companies, Chrysler and Daimler-Benz, merged into one stronger company. This new company had about \$150 billion in sales and 440,000 employees around the world. We have operations in over 200 countries and we manufacture in 34 of those countries. We are obviously a global company, whatever that means, and we have been referring to ourselves as a transnational company. We have two headquarters and one stock traded around the world on over 20 exchanges, both in dollars and euros. We are domiciled in Germany, but exactly what nationality company we are is open to discussion.

I will first address the knowledge economy. Knowledge is an interesting resource because it is one that grows, almost exponentially. It is not consumed. Modern technology has enabled a lot of things, and our industry has profited enormously from the knowledge economy.

We now have virtual organizations and virtual marketplaces. We are able to simulate almost every facet of vehicle behavior. We can render, and approve, vehicles in the digital domain. We can build prototypes, packaging them in three dimensions in the computer. The program is essentially approved before we ever cut the first piece of clay or plastic or metal.

We can also simulate the driving experience in the virtual domain. And we are rapidly developing expert systems to take advantage of the knowledge that we have and further accelerate the process. It makes us quick-

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er and more flexible. We think it makes better products, too, and it enables us to operate around the clock.

At the same time our customers are getting better informed. I find it fascinating that people who cannot program a VCR are on the Internet every night. People get information on products, compare them, and in some cases shop for them, all on the Internet. We have tiny dealerships in the middle of nowhere that sell phenomenal numbers of vehicles over the Internet. We are taking advantage of this new commerce, and our customers are also taking advantage of it. It is the new reality.

But we also see some caveats. Access to information does not make you well-informed any more than having a library card makes you well-read. Increased communication technology can absolutely drown you in information. I am not sure that the Internet has increased the production of rubbish but it has certainly improved the distribution and dissemination of rubbish.

The Internet places a huge premium on selectivity, qualifying your sources, and screening and managing the information. In our case, we are developing our own internal information system where we screen the information and sources, and then attempt to retain only the information we think is qualified. Otherwise, you can drown in information. Far from being more productive you waste a lot of time and effort trying to dig through all of this supposed information to find something of value.

With the move to a knowledge economy, huge investments are going into the knowledge business and Internet companies. But these Internet companies must rely on some other industry to use the output. We at DaimlerChrysler are in the business of making things. We make cars, trucks, airplanes, rockets, and satellites. We use this knowledge. We have no particular interest in accumulating knowledge for its own sake. We try to accumulate and deploy knowledge to enable us to make things. Lou Gersner, CEO of IBM, said six years ago, "How do I use this stuff to do something useful?" That is our motto. This is all fine, but how do I use it to do something useful?

Efficient production relies on information. Factory workers use their heads more than their hands these days. About 25 percent of the assembly line people we hire are college graduates, and that percentage is growing. We spend more time on training than we do on supervision. The manufacturing business is increasingly one of highly qualified workers. There is no room left for illiterate people, for people who cannot cope

with a knowledge economy. The key point is that knowledge is a means to an end for us. We use knowledge. Knowledge is not an end in itself.

Another issue is globalization. It is not a choice; it is a fact. For example, during the Christmas holidays we introduced a Jeep powered by a fuel cell at the Los Angeles auto show late in the day. The following morning stories about that introduction, and pictures of me with the Jeep, were on the front page of a newspaper in a small town in India and in the *Aruba Times*. (I don't read either one of those. I just happen to know a couple of engineers who were in India and Aruba respectively over the holidays.)

People rail against globalization and then they publish their essays on the World Wide Web. Coca-Cola and Jeep, which are among two of the best-known brand names in the world, personify America to most people. They are known throughout the world. Coca-Cola, as I recall, does over two-thirds of its business outside of the United States. Globalization is a fact.

Another important issue is the convergence of globalization and the knowledge economy. We see this in obvious areas like language and measurement systems. Even though English is becoming the de facto worldwide language of business, speaking English does not necessarily mean you understand each other or are really speaking the same language. A lot of people mean a lot of different things by the same words. That is something we have to deal with.

Another issue is corporate culture. The differences between "American" and "German" culture were largely irrelevant in our merger. But every corporation has a culture, and that was what we found more challenging to put together. In our case, we were two strong companies and each company had its own operating style and culture. Because we were both successful we both felt that our success was a direct result of our culture. Had one of us been unsuccessful it might have been a lot easier to say, "Obviously that didn't work. We'll abandon that and go to something else." But when both of you are successful and you are both making record profits, it becomes a challenge to decide which of those two methods is the better one. Obviously we wanted to keep the best of both approaches and we are making progress at that. I think we are doing fairly well, but it is a challenge. Our merger was a lot harder than a clear-cut case of an acquisition of a weaker player by a stronger player.

I would like to give an example. Our policies on working with outside partners on intellectual property were radically different. Chrysler's approach was to form partnerships with outside agencies, suppliers,

academia, and so on, and leverage those relationships by sharing our goals at the very beginning of a program. For example, we would commit to the supplier for the duration of that product, whatever its life cycle was, and we would work together on it. The supplier typically would own the intellectual property or we would share it. We would leverage both of our investments to achieve our objectives at the lowest possible cost. DaimlerBenz, however, typically had a very strong in-house research operation. It did not approach suppliers until it had already developed whatever it wanted to build and protected it to whatever degree seemed appropriate. Then it would go to the supplier with an offer to, in effect, make it to print. Those are obviously radically different approaches.

Each of us felt that our approach was fundamental to our success. Daimler felt that owning this intellectual property enabled it to be first to market. This helped create a technical leadership image and reality. But, of course, it came at a cost. We are not going to pick one or the other. It is our intention to continue to do things the way the former Chrysler did them when that is appropriate, and do them the way the former DaimlerBenz did them when that is appropriate. The challenge will be for us to decide in each case which is which.

We also have a challenge with the intellectual property management business. We at Chrysler have a view that it is extremely difficult, if not impossible, to protect intellectual property. Your greatest protection of intellectual property is to deploy it faster than others do. You can get patents, and we do that. But a patent is largely a means of motivating people to be innovative and to reward people for innovation. We make no attempt as a corporation to profit directly from patents or licensing patents. In fact, our general practice is that we do not attempt to license patents and profit from them. The only profit we get from intellectual property is the indirect effect of trying to be first to market with innovation. But that is not the DaimlerBenz approach.

Other issues at the convergence of government policy include trade barriers and protectionism. Several years ago we walked away from a \$2-billion proposition in South China to build minivans. We were finalists in this competition. But we walked away because, fundamentally, the Chinese government could not deal with the piracy problem and could not ensure us that the technology we were bringing to it would be protected.

There is a distinction between protecting intellectual property and piracy. You cannot protect intellectual property. Information and knowledge is transferred too rapidly for significant protection. But piracy is

something else entirely. We build Jeep Cherokees in Beijing. At least 12 companies in China have cloned the Cherokee and are openly selling copies of the vehicle. This violates all of our principles and all of our laws in this country and in China. But nobody does anything about it. We cannot tolerate that.

The financial policy is an interesting one. We have one stock that is traded worldwide. I think this is the first time that has been done. We were ultimately dropped from the S&P500 because "we weren't an American company." At the time of the merger 44 percent of our stock was held by Americans, which was the single largest nationality holding our stock. Because a lot of mutual funds are indexed to the S&P500, when we were dropped those funds then dropped our stock. We are now roughly 25 percent held by Americans. The policies of American financial institutions have driven us to be a less American company if you measure it in terms of who owns the stock.

I want to conclude by discussing the Partnership for a New Generation of Vehicles (PNGV). This program involves several of the points already mentioned. PNGV was started five years ago between the federal government and USCAR, which in turn is an organization of the three domestic automobile companies. PNGV had three goals. The most well-known goal was to try to achieve up to three times greater fuel economy in a middle- to large-size passenger car like Dodge Intrepid or Ford Taurus. The ultimate purpose was to reduce dependence on foreign oil and help achieve energy independence. Other goals were added along the way: to reduce carbon dioxide emissions and "to enhance national competitiveness."

We have made tremendous progress. A peer-review committee of the National Research Council is in the process of publishing its fifth review on the program. The program has had some criticism but generally it has gotten rave reviews for the progress we have made in fuel cells, hybrid car trains, lightweight interior body construction, and lean NO_x catalysts. We have also seen controversy under the general heading of corporate welfare. Our best answer to that is that we do not take a dime of government money. Nevertheless we spend a lot of time talking about whether or not we get corporate welfare. The controversy increased when we announced the merger because DaimlerChrysler is incorporated in Germany. Are we still a domestic company? Is it appropriate and conducive to national competitiveness to have one of the players domiciled in Germany? This question has led to others: What is national competitiveness in this environment? What is a domestic automobile industry?

Are General Motors, Opel, Volvo, and Saab domestic automobile companies? Opel and Volvo are in EUCAR, the European equivalent of PNGV. They are also in ACEA, which is the European Manufacturers Association, along with DaimlerBenz, and yet they are owned by GM and Ford respectively. Lately, we have been trying to put PNGV together with EUCAR and JCAR, the Japanese equivalent. We see that these are global problems and that we need to work together on global solutions. But we have this basic dilemma that keeps coming up: Are we a domestic company and should we be involved in PNGV?

The Administration has been extremely supportive. Ford and General Motors have been generally supportive. I think we have this issue handled, but we have been talking about it since we announced the intention to merge. Some of the fundamental underlying questions are still there.

We are going to continue to focus the industry on applying knowledge. Our goal is not to generate knowledge for its own sake. Our goal is to use knowledge as a tool to create products. We are in a very exciting and dynamic era. I have never known a more exciting time. Just a few years ago if you had suggested that we might be on the brink of doing hybrid power trains or fuel-cell vehicles you would have been thought crazy. Now it is just a matter of who is going to do it first.

Five of the six concept vehicles we showed at the Detroit show were nontraditional car trains typically running on nontraditional, synthetic fuels. We are going to do occupant sensing to identify and profile the occupant in a car (by age, weight, etc.). Then we will deploy the occupant protection devices accordingly.

We are on the brink of bringing all of the computing capability in vehicles into a network in the same way that everyone's PC is on the Internet. Vehicles will soon be on their own network, which offers tremendous opportunity. We will have more driver-assistance devices like the Intelligent Speed Control that the S class has. I am not sure if we will ever see autonomous vehicles but we will get pretty close.

Technologically, we are in a fascinating era and we are using all of the knowledge in the world to accelerate the application of the things we learn. The issues and the problems are global, not local. The solutions are global as well.

The knowledge economy is the language of corporate globalism. We should recognize that as a fact. We should leverage the knowledge economy to provide the finest products we can. We should also identify the issues, determine if they are regulatory, financial, or whatever, and go about fixing them. We do not need to debate whether it's a good idea or not.