

## A SECOND RATE SOCIETY — NEVER!



Forrest D. Brummett, SME's  
1984-85 International President.

What was once recognized as the unique genius of America is now slipping away from us and, in many areas, is now seen as a "second rate" capability. Unless action is taken now, this country is in real danger of being unable to regain its supremacy in

technological development and economic vigor. First, all Americans must understand the serious implications of the problem; and second, we must dedicate ourselves to national and local actions that will ensure a greater scientific and technological literacy in America.

To help all of us understand the problem, let me cite just a few facts:

- Many of our nation's high schools do not offer the necessary math and science courses to qualify their graduates for consideration by our accredited Engineering institutions.

- Educational institutions throughout the country report an ever increasing number of students cannot read and comprehend, and are not prepared to select careers in science and technology. Remedial courses in both Reading and Mathematics are the order of the day. In addition, these same institutions report that there is a woeful lack of people qualified to teach courses in modern Math, Engineering, and Natural Science. Many advanced courses in high schools, colleges, and universities languish through lack of qualified teachers.
- There is very little "real world" career guidance at the secondary school level in the area of Engineering, Technology, and the Free Enterprise System. Consequently, when students get into college, many choose these careers without adequate preparation as they become aware of the potential opportunities in these fields.

The end result to this dilemma is that industry ends up with a product they cannot utilize without major training and re-direction. This points up what, I believe, is one of the most serious problems facing American industry today — the technical illiteracy of its engineers, managers, and executives. Few of them, due to lack of adequate training in the academia, have the skills to solve "real world" problems and implement current and new technology required to compete in the marketplace today or in the future. Business decisions require weighing variables, such as sales and costs, product quality and productivity, price and market share, profit and taxes. Many of our managers aren't well equipped to reason and think in those terms. Is it any wonder that they are drawn to legal or financial solutions rather than technical or human ones?

New and innovative technological concepts have brought about a clear awareness and recognition of the need for the secondary schools and universities to produce an abundant supply of "hands on," "real world," "applications oriented," individuals that more adequately meet the needs of today's industries. This means updating and improving the technology, engineering, and science curriculum; and providing the most modern Lab facilities and teaching methods available.

In addition, the faculty must be given the opportunity for updating their skills as new technology emerges, and as current technology changes. Herein lies the need for interaction between the academia, industry, and the government.

Since we cannot predict, with any precision, what kind of jobs people will hold over their 35-40 year working life, it is best to provide a good general education with an ability to adapt to changing jobs and careers. If work requirements change abruptly and quickly, the educational system must

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respond faster and more efficiently to training needs. This will require better ties with industry and should not exclude the possibility of more industry based activities.

Like it or not, we are in an international marketplace that impinges on our nation much more than they used to, and basic institutions must change to account for that.

The trends are now reflecting the loss of our technological edge. e.g.: We have allowed our piece of the world trade to drop from 17% to 12% from 1965 to 1983 while the volume of international trade increased from 150 billion to 1.9 trillion. For example, we have lost our share of the world market in consumer electronics from 35% to 9% in the last 15 years.

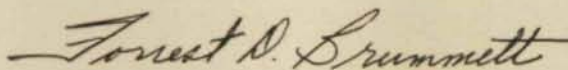
These are depressing facts and it will take an enormous amount of concerted *action* by all Americans to overcome this terrible handicap, which we are now recognizing and which will commit us to *mediocrity* and *second rate*, if not addressed. Technology impacts all our lives!!

Citizens need to change their attitudes on manufacturing technology to become *economically more responsible*. This also begins in the educational system. A long range view is needed to emphasize technical innovation, increased productivity, and quality improvements. *We must learn how to produce more than we consume!*

The time is here - we are an industrial nation in deep trouble. We can no longer afford the luxury of confrontation. Traditional adversary relationships must be tempered by the necessity of industrial growth and survival. This effort must begin in our educational systems, where specific skills and knowledge are taught, utilizing modern teaching methods, computers, and facilities to produce a product that meets the *real needs* of industry today and in the future.

We cannot be bound by tradition; we must initiate change - flexibility in curriculum adjustment to meet current needs as well as the future, based on manufacturing technology trends. *Education is everyone's responsibility.*

Forrest Brummett



SME, International President

## VIEWPOINT

**Letters for this column should be addressed to Letters to the Editor, GEAR TECHNOLOGY, P.O. Box 1426, Elk Grove Village, IL 60007. Letters submitted to this column become the property of GEAR TECHNOLOGY. Names will be withheld upon request; however, no anonymous letters will be published. Opinions expressed by contributors are not necessarily those of the editor or publishing staff.**

Dear Editor:

I read with great interest your first issue of GEAR TECHNOLOGY. I find it a refreshing move based on these economic times.

I would be most interested in communicating with you on one of our major concerns—foreign competition. I believe this will greatly affect the industry more than any technological change now or in the foreseeable future. Foreign competition, for all the reasons we have heard, is making startling inroads into the available market of the American gear manufacturers. In some cases, based on the company's size, overhead expenses and services rendered, I can certainly understand how these companies can be competitive. This situation even occurs in some of our smaller gear companies when they are compared price-wise to some of our larger companies within this country.

But, I can tell you that we've also seen some highly questionable pricing situations which can only occur because of some unfair competitive position or a willingness to undermine our market until it's weakened to the point where they can raise their prices or run the competition out of business. Some of the unfair competition has to include our tax base structure compared to theirs, based on our cost of defense, our personal income taxes, our unemployment taxes, our benefits programs, etc.

If as a nation we're sincerely interested in maintaining our standard of living and offering all these opportunities, then our industries must be strong. For our industries to stay strong, they must stay productive. To do this, we must be on a fair competitive basis with those people that compete against us.

When I speak of unfair practices, I am not just vocalizing "sour grapes" since we are a strong advocate of free trade. However, we are finding in these economic times it is preposterous to be bidding on a federally funded work program (which our tax dollars are paying for) against foreign competition. In other words, we are paying corporate income, personal income, and unemployment insurance taxes, and those funds are being used to pay our overseas competitors to build products for our unemployed people. This situation seems incomprehensible to us.

I'm afraid that the political issues in the gear industry and this issue alone may be more important and more interesting than the technical side of our industry.

Again, I wish you good luck in this new venture.

Sincerely,  
MILWAUKEE GEAR COMPANY

Harold Trusky  
President