

PRESENTATION OF LARRY MILES in BRAZIL

In 1964 I read an article in the magazine "Reader's Digest", as follows:

BIGGEST THING SINCE MASS PRODUCTION

83-15
By Herbert STUKART

A carefully worked-out technique of "value analysis" is producing dramatic dollar savings for consumers and taxpayers.

Back in 1947, Larry Miles, a General Electric design engineer, walked into his boss's office in Schenectady, N.Y., with a bone-jarring question: "Doesn't anybody here care what things cost?"

Somebody, of course, did. And the idea advanced that day by the design engineer not only shook his own company, but may prove one of the greatest boons to consumers since Henry Ford popularized mass production. What Miles expounded was a technique - now called value engineering, value control or value analysis - that substantially reduces the manufacturing cost of almost any product to which it is applied, without lowering performance.

In that same year I went to New York to attend a seminar on Value Analysis. On that trip I learned a lot of things about the Father of Value Analysis, "Lawrence D. Miles".

The story began when the whole world was fighting a bloody war against totalitarianism.

Always present at the fight for democracy, GE made the turbochargers for the "Liberty Planes", the Models B24, later Models B29.

At a market with shortage of almost everything, Miles, purchasing engineer of GE at that time, was charged "to find, negotiate and get material" to increase production from 50 to 1,000 turbos a week.

Miles spent 2 days a week at the vendors' workshop encouraging them; 2 days at GE factory proposing alternatives; 1 day at Pentagon demanding priorities, and on Saturday and Sunday working at his office

Whenever there was shortage of a certain material, Miles looked for an alternative that could comply with the same "function" of the original material.

In many cases, Miles observed that the alternatives proved to be better in quality and less costly.

After winning the war, Miles inquired:

. "Why look for alternatives only when forced by the circumstances?"

. "Why not challenge the value of products purposely?"

From these questions "Value Analysis" came to birth. V.A. does not only investigate cost or quality, but the global cost.

Then Miles studied GE consume products, basing on fuction, identifying unnecessary costs and/or improving value, at less cost without prejudice to quality, reliability, security and appearance.

In one year, this new method saved for GE, just for one item: Us\$ 200,000.

Encouraged by the success, GE invested Us\$ 800,000 to improve the "Value Analysis techniques" and saved Us\$ 200 million (± 100 billion cruzeiros) in 17 years, a return of 24,900%!

GE rendered to Miles the "greatest honour" and he has become the worldwide prominent man of GE.

Later Miles founded and was president of SAVE = Society of American Value Engineers and wrote the book "The Techniques of Value Analysis" published in 12 languages, which describes Value Analysis as follow:

V. A. ACCORDING TO MILES:

"VALUE ANALYSIS IS A PROBLEM SOLVING SYSTEM IMPLEMENTED WITH TECHNIQUES... IT IS AN ORGANIZED CREATIVE APPROACH... FOR IDENTIFICATION OF UNNECESSARY COSTS, I.E., COSTS THAT PROVIDE NEITHER QUALITY, NOR USE, NOR LIFE NOR APPEARANCE..."

As from 1954, the Department of Defense (DOD) of the United States started to train specialists in Value Analysis, and in 1963 the obligatoriness of Value Analysis, for all purchases over Us\$ 100,000 was included in DOD's purchasing policy (Part 17 Section I).

Miles received from the Navy the "Distinguished Public Service" medal which is the highest honour for a civilian.

During my stay in New York, I was also shown Miles's articles and interviews in the newspapers "Wall Street Journal", "Los Angeles Herald Examiner", "Management Magazine" and a number of specialized magazines in Engineering, Production, Purchases, etc.

Upon my return to Brazil I made my first V.A. based on Miles's principles.

I worked for a laboratory in Rio de Janeiro where we received formulas and technological packages from Europe.

A few years ago we had difficulties in acquiring a certain chemical product, name of which I cannot recall, but its length was at least 20 cm and it was extremely expensive although it had no considerable influence on the final cost.

So, according to what Miles has taught us, I asked: "What is its function?"

To denature the alcohol. We found out that, in the country of origin of the technology, the alcohol for drinking paid very high tax. However, for industrial use it was tax exempt provided it were denature

As in Brazil there is no similar law and our country-man can buy "cachaça" (=typical Brazilian alcoholic drink) cheaper than alcohol, such product had neither utility nor function and could simply be suppressed, thus saving some thousands of \$ per year.

However, together with my first success I could feel the emotional resistance to V.A.

My alternative proposals received such answers:

- . IT'S ALWAYS BEEN DONE LIKE THAT ... WHY CHANGE?
- . IT'S THEORY, PRACTICE IS DIFFERENT ...
- . I AGREE, BUT ...

My intention was only to save money so I couldn't understand these oppositions.

I got the answer from my tailor when I asked him what for were the buttons and buttonholes on the sleeve of my coat.

He answered: "It's a habit".

"But I don't see any function nor better appearance in my jacket with these 8 buttons. Without buttons you could charge less."

"Good tailors need to put buttons. It's a costum," he answered.

I was puzzled. Upon investigating the matter I learned that the buttons on the sleeves were Napoleon's order. His grenadiers (soldeirs) used to dirty their bright uniforms by cleaning their noses on the sleeves. As the buttons hurt their noses, this bad habit was avoided.

So you see, notwithstanding hid defeat at Waterloo, Napoleon in the "Invalides" must be jubilant because the Englishmen, German and Russian even after 17 decades still obey his order.

In this way, I have learned that the purpose of V.A. is not only to find the best and most economic alternatives but also to change habits and customs thus eliminating the fear of the new and unknown, needing to transpose 3 barriers: ignorance, distrust and inertia. That is why we need quite a lot the motivation from the Father of V.A.

My cooperator has complained: "Why does the film LAWRENCE OF ARABIA exist and LAWRENCE OF BALTIMORE doesn't? This would be of great motivation for all of us."

LAWRENCE OF ARABIA was a great organizer and has created a new philosophy of peace, thus benefiting thousands in the British Empire. He wrote the book "THE 7 PILLARS OF WISDOM" and entered the Chamber of Lords.

Miles, LAWRENCE OF BALTIMORE is a great organizer and created a new philosophy that by associating cost to function economies are achieved thus benefiting thousands of industries and millions of consumers. Miles wrote the book "THE TECHNIQUES OF VALUE ANALYSIS". Of course, he will enter, beside Taylor and Fayol, the gallery of engineers with great merit to the science of administration.

We have observed, in the following years, Larry's steps as well as his work through newspapers by Canada, Mexico, South Africa, Japan and Europe.

Finally, Miles's ideas got official consecration. On May 12th 1977, Resolution no. 172 was introduced in the American Senate, among others, it says:

"R E S O L U T I O N 1 7 2"

INTRODUCED IN THE AMERICAN SENATE

IT IS RECOGNIZED THAT V.A. IS A PROVEN METHOD TO CONSERVE ENERGY, IMPROVE SERVICES, SAVE MONEY ... APPLICABLE WHEREVER THERE IS "FUNCTION" AND A MEANS TO MEASURE IT ... HAS SAVED US\$ 12,84 FOR EACH DOLLAR SPENT.

... HAS BEEN SUCCESSFULLY APPLIED IN PRIVATE INDUSTRIES TO GENERATE ADDITIONAL PROFITS AND BETTER PRODUCTS AND SERVICES ... THAT ALL FEDERAL DEPARTMENTS AND AGENCIES SHALL UTILIZE WHEREVER POSSIBLE V.A. AND V.E.

We have learned that DOD made in 1979 audited economies of US\$ 627 million and that companies in general saved up to 4% on sales through V.A.

The German Engineers Association, which is well organized and methodical, has even created a new industrial norm for V.A. (DIN 69 910) honoring Miles in Dusseldorf.

However, what has impressed me most was a group of 40 Japanese manufacturers, enthusiastic of V.A., at a congress in Hyannis. The group opinion was summarized by the president (Mitsugi Kanya) of Matsushita Electric Works who textually declared:

"... the Japanese industries have expanded, developing advanced technologies basing on V.A. ..."

In 1982, at a Material Management Congress in Los Angeles, with about 3,000 participants, included the Trade Secretary, President of U.S. Steel, Lockheed and others, Miles made a conference about "Value Analysis Principles".

The people overcrowded the room by sitting on the stairways and on the floor.

They listened to Miles with the same respect, admiration and enthusiasm that a catholic would listen to a Pope's homily.

Finally, the Pope of Value Analysis has spoken there.

At the end, during the long lasting applause, I thought to myself: "If we could bring Larry to Brazil, what a motivation it would be for all of us. Certainly it would cause an increase in our industrial competitiveness."

Luck was on my side. At night at the dinner Larry and his wife Eleanor sat at our table.

I remembered the dedication of his book (A few times each century the random forces of heredity and environment create a masterwork in the form of a woman - a wife - who nourishes the soul, spirit, emotions, mind, and body of her husband - morning, noon, and night - every day. She enjoys her life and enlarges his. She adds sparkle, zest, accomplishment, joy. One is mine - my wife Eleanor.)

It reminded me of a technique I have learned in France: if the problem is difficult, "Cherchez la femme".

I went to Eleanor and told her I was from Brazil and had great admiration for her husband.

She answered: "Oh! Brazil. Carnival in Rio, coffee ..."

I interrupted her: "We also export jet planes, cars, steel, etc., but we also produce orchids and diamonds for ladies like you."

She answered: "Brazil? oh! I love to dance Samba! "

The game was won. In January Larry wrote me:

"I wish that my trip to Brazil will be of great benefit to all manufacturers and professionals in Brazil."

Today, Larry is here with us thanks to Eleanor. All of you will have the privilege and pleasure to listen to the words of the Pope of V. with great benefit I hope.

A round of applause to him.