COVER: Venango County Court House
Franklin, Pennsylvania

Aesthetically beautiful and physically sound after weathering more than a century of storms, this magnificent structure stands as a symbol of rural justice and human dignity.
TECHNICAL ARTICLES:

EFFECTIVE TECHNICAL SOCIETIES
by
John A. Jonelis

MOTIVATION THEORY
by
R.A. Haege

PARING THE FAIRING
by
Larry Davis

BIRTH OF AN EMPLOYEE SUGGESTION PLAN
by
Ron Chase

COLUMN FEATURES:

Thunder Editorial ...........................................
Bits & BarbS ..................................................
Picture Potpourri ...........................................
The Bottom Line .............................................

CONTRIBUTIONS - Contributions to VALUE WORLD are welcome in the form of letters to the BITS and BARBS column, technical articles, introduction of new techniques, photos and material for cover stories. VALUE WORLD accepts no responsibility in connection with any liability that might occur as a result of material published; the views and opinions expressed by the contributors do not necessarily reflect those of the Publisher or participating Societies. VALUE WORLD is published bi-monthly by the Society of American Value Engineers, with Second Class entry at Southfield, MI 48076.
VALUE WORLD IS HERE AND NOW

Recently, our business office was notified that the Publishers of PERFORMANCE Magazine
were suspending publication of PERFORMANCE Magazine due to economics; citing reasons of
ever-rising costs, a lack of advertising revenue and a unit cost too prohibitive to continue publi-
cations. In parting, the Publishers added that they had enjoyed the affiliation and sincerely hoped
that an alternative means of communicating worthwhile thoughts and ideas could be found.

We thank them also for a fine job.

We gathered our senses, and determined that we were in a REACTIVE mode of operation——
but needed to get into a PROACTIVE one. So we relaxed, grabbed a cup of coffee and started to
think.

1. WHAT DO YOU EXPECT FROM A PUBLICATION:

An editor quickly learns an early lesson. THE READERSHIP COMMANDS.

There is no merit in putting out a magazine just to put one out. No one will read poor copy.
What is needed is something with ZING! Something with fire! Something relevant and useful! A
magazine that Society members will want to read, re—read a second time, and put into his/her
personal library for later reference.

This can be... VALUE WORLD.

2. WHAT VALUE WORLD EXPECTS FROM YOU.

VALUE WORLD will permit two—way communications. VALUE WORLD will provide the
readership with timely, informative and interesting reading and act as a vehicle for you to express
yourself professionally in advancing the state of the art.

We encourage your technical articles, short stories, BITS and BARBS — your thoughts and
ideas on Value, work simplification, idea programs, performance, productivity, motivation, and
creativity.

3. GREAT PLANS.

We have great plans for VALUE WORLD. Some, you have got to like.

• THUNDER will continue as a hard hitting editorial.
• BITS and BARBS will be our reader involvement column — for letters, opinions
  and items of interest.
• PICTURE POTPURRI will be added along the lines that a picture is worth a
  thousand words. Members will volunteer snapshots, along with perhaps a cover
  story.
• THE BOTTOM LINE — A very important person will be featured each issue high-
  lighting some current topic of interest.
• TECHNIQUES TO TRY will be a regular feature soon to be introduced; a HOW
  TO expose on tools or techniques to use in daily activities.
• A SHORT TALE — The trend preference in reading is toward small condensed
  articles and mini—messages. VALUE WORLD will introduce some.

And we are not locked into these. Anything of Value can be added.

Finally, we would like you to look at the realities of the situation.

We have turned publisher almost overnight and will experience growing pains. The editorial
staff is a bunch of hard working, non—paid, individuals who earn their livelihood by other means.
Long since has the ego—drive ceased to be a motivator.

Your help is needed. VALUE WORLD will reflect like a mirror, no more, no less than your
input.

We look forward to an enthusiastic response.  

S.A.V.E.
One of my vivid early musical experiences involved tooting a Tonette for the bandmaster as a prelude toward greater musical challenges. A trumpet perhaps.

As I played a simple tune, the suspecting bandmaster jerked the instrument from my lips and observed that I was humming rather than blowing. Alas, no trumpet for me.

Nevertheless, this proved no handicap over the years as good music by others was personally appreciated.

A short time ago, we attended the Franklin High School winter concert, which is free, and not considered the big musical event of the year. The second number, entitled “Russian Christmas Song”, even for an untrained ear was recognizable as a very demanding and beautiful piece. It involved Russian Orthodox songs put to an instrumental musical arrangement. (No musical instruments are used in Russian Orthodox Services, I’m told.) It was evident that great co-ordination and stamina was necessary for this long number; the clarinets played almost unceasingly. At the climax, more than the normal applause fell upon the band for their efforts and they rose to nod their bow. Much to their astonishment, the audience also rose and showered them with a standing ovation. Pleasing disbelief and amazement registered on their faces. Smiles appeared.

Particularly, I focused on the sparkle in the eyes of one special girl; eyes, that I have learned to read quite well and understand for some time now. What they registered was this: “Gee, they really liked it and it’s important to them; and if it’s important to them, then it’s important for me too”.

Dialogue at band practice the following day confirmed my suspicions of the effect. They reckoned that this was the first standing ovation for the band, ever. But this is not the important point. What is important is that the parents and other adults, demonstrated an active expression of appreciation and commitment to the importance of the band’s efforts. Tone Deaf or not, it was possible for others and myself to visibly provide encouragement for the students toward musical excellence.

Value Engineering, Suggestion Systems and Productivity Programs likewise have “tone deaf” management at times; leaders untrained in value principles who may not understand details or techniques necessary to directly bring ideas to fruition. Nonetheless, as in the musical experience, this does not mean that a cost conscious environment cannot exist under these circumstances.

The key is involvement and recognition; a manager must show by vivid example his interest in the value effort. Failure to provide this involvement will sentence even a well-structured program to its eventual doom. Peer functions will treat it as an orphan, to fall at the first axe.

What is needed is a management commitment that extends past words into deeds. One deed could well be the open recognition of those individuals who do, in fact, contribute to a cost conscious environment. Without commitment at the top, the Value Manager might as well be humming through a Tonette.
Are increases in telephone facility costs inevitable? "No way," says Robert J. Harbaugh, Supervising Engineer of Bell of Pennsylvania. One example was a VE earlier system. which resulted in a 55% savings over an existing system built two years earlier. The heating, ventilating, and air conditioning package was reduced to $19,200 or $1.07 per square foot, compared to $44,600 and $2.32 per square foot on the earlier system.

This was accomplished by replacing the hot water boiler, boilerroom and LP gas systems with electric heat, providing additional insulation and adapting energy—conserving garage temperature standards.

MANAGERIAL STYLE — "Should the Value Manager be a Lion or a Lamb?"

Our Readers say:

FANGS AND CLAWS —

If he has the strength, courage, fangs and claws of a lion, he can make his value effort into a profit—making operation, successfully competing with every other profit—making operation in the mainstream of the business. If, however, he is a lamb by nature, does not like to make waves, and has enough money in the bank to survive the next recession; he usually conducts a gentle "Savings Program" that makes the boss look good and the controller smile tolerantly — on him and on all the other lambs in the periphery of the business.

Given the strength and courage, should the lamb become a lion? Think of a strong and brave lamb in a den of lions. Are the strength and courage enough? No. It also takes fangs and claws to survive in a den of lions. The fangs are rapport with Marketing and Design Engineering; and the claws are knowledge of cost accounting and a working relationship with the Finance people.

Of course, the value manager should be what he is by nature, but too many U.S. value managers are lions in lamb's clothing, and thus are subject to be shorn at the first cut—back when "programs" go and profit—making operations stay.

LIONS LEAD —

I believe the Value Manager should be a lion! Value Engineering has always needed selling and the Value Managers first hurdle is to sell — as strongly as possible — the discipline. Secondly, he must organize, train and manage a group of people with divergent interest and must be a strong organizer and vibrant "incentive producer". Lambs are led, lions lead. The Value Manager must lead each of his disciples, with a strong hand to the rewards available.

LARRY FELDMAN
ALBANY, GA.

RESULTS NOT PERSONALITY —

Since everyone should be a value manager, both lions and lambs must be included; therefore, the value manager does not have to be either. The Value Engineering Manager should not appear to be either lamb or lion, but should be able to use lamb—like and lion—like attributes when the occasion and the circumstances warrant, which would be very seldom. Value Engineering after all is results oriented, not personality oriented.

DON REED
KENSINGTON, MD.

LIKE THE WEATHER —

Since most managers will always be more interested in Performance and Schedules, management for value will always take a back seat. However, knowing that the viability of the program may depend on that extra value, the value manager may have to be a lion in pleading for his case. Yet knowing that VALUE comes in as a second look (not second guess) and may not be appreciated if not an unwanted task at the end, it may have to come in as a lamb and go out as a lion. This means to invest little and produce big to prove its worth or value.

VINCENT LAO
ALEXANDRIA, VA.

GLUTTON AND MUTTON —

Female lions hunt in prides for male whose sole task is procreation. Sheep are slaughtered or shorn for the benefit of others. Neither animal suggests the heroic qualities required of the true leader of a value engineering activity. The dedicated, motivated, educated, intelligent humanist is required, not an individual patterned after sad examples from the lesser creatures of the earth.

GORDAN FRANK
BURKE, VA.

CHAMELEON —

A Value Manager must be a leader, a communicator and a negotiator — he must be able to assign responsibilities and have the assignments accepted and accomplished and he must be able to be a lion and a lamb — when appropriate to get the job done.

RICHARD VANDEN BOSCHE
DUXBURY, MD.

GENTLE TIGER —

Neither. The Value Manager should be a gentle tiger.

HAL TUFTY
WASHINGTON, D.C.

PERSONALITY TELLS —

Some interesting questions can be answered in different ways if your self—appraisal suggests that you are a lion or a lamb. These characterizations do not necessarily mean incompetence, moreover, it is a portrayal of character applied to basic job approaches. Neither the lion nor the lamb as generalized here is any less cunning nor skilled in his art. Certainly an overt, direct approach requires competence. Likewise, cunning and deliberate movements must also receive skillful attention. Now it is interesting to observe the effect that these two characterizations have on all too familiar questions.

One question that is often asked of successful administrators by interviewers, or editors of professional magazines is: What personal strategy helps you in your job? Your response directly reflects your characterization as a lion if you answer with forthrightness, a direct approach, and don't beat around the bush. On the other hand, if your answer is: we wait and see, we make sure of our facts, we keep an eye on the operations, and see, we make sure of our facts, we certainly an overt, direct approach requires competence. Likewise, cunning and deliberate movements must also receive skillful attention. Now it is interesting to observe the effect that these two characterizations have on all too familiar questions.

One question that is often asked of successful administrators by interviewers, or editors of professional magazines is: What personal strategy helps you in your job? Your response directly reflects your characterization as a lion if you answer with forthrightness, a direct approach, and don't beat around the bush. On the other hand, if your answer is: we wait and see, we make sure of our facts, we develop strategies, and do feasibility studies, the answer also is clear.

JOHN HOLLAR, JR., CSSA
HARRISBURG, PA.

READER ACTION POINT — We welcome your letters:

"Regarding the work ethic, why doesn't Sammy run anymore?"

Tom King, SAVE editor

S.A.V.E.
Frequently "No-Fault" is the apparent zenith of our goals. This syndrome manifests itself in many different forms, from riding the picket fence when making decisions, to spreading the blame on failures so that no single individual can be identified as the responsible party.

At a recent meeting a well-known speaker asked the rhetorical question - Are we the no-fault generation? He suggested that although this trend is probably not gaining momentum by design, several indicators - no-fault insurance, no-fault divorce, nolo contendere on legal issues, are steadfastly creating the impression that no one wants to be identified with failure.

It seems reasonable that if no one individual will accept the responsibility for a failure or mistake, then this individual should also be disqualified from the right to accept accolades for successful achievement. Think for a moment of the last time you heard someone voluntarily own up to a goof.

We can frequently learn more from mistakes than from successes. I'm not suggesting that mistakes are better than successful accomplishment, but we frequently assume that a successful pattern came easily and that if we duplicate the pattern we can be assured of the identical achievement. Failures on the other hand, usually create an inquisitive attitude, questioning why things did not turn out as planned, and often suggest new techniques with far greater probabilities for success.

Perhaps we can achieve two goals simultaneously - reversal of the no-fault image and avoidance of recurring mistakes. Consider identifying the individual responsible for a failure solely for the purpose of factually analyzing the cause, determining corrective action and informing all concerned parties to preclude repetition of the original action. This might be strong medicine for those would-be head beaters, but could be a new way to develop a fix-it generation.
SAVE has one great problem in common with the other professional societies in America. No matter how hard they work to serve their members, they cannot seem to get the job done. Most of the members do not attend Chapter meetings, and those that do are only partially satisfied. What is wrong?

In order to solicit your suggestions toward improving our Society/Member relationship, I will (1) state the problem as I see it, (2) provide some information from a well-known authority, and (3) ask some questions.

What is wrong? One interesting suggestion blames the program format that is followed by professional societies. All of our societies use the same general format for their programs. When a new society or a new chapter is formed, it follows the others - for good or bad. (The path of the calf.)

The format, as seen by a typical member, could be something like this: He gets a program notice through the mail. If he decides not to attend, he hears nothing more about it; not from the society, not from his fellow members. If he decides to go, then he (1) "joins" in a social hour where he may or may not find an interesting conversation; (2) eats dinner and has some more random conversation; (3) listens to a short business meeting; (4) hopefully experiences a rest room break; (5) listens to a speech by an "expert"; (6) sometimes enters in a "question/answer" period; and (7) finally adjournment and an 80-20 chance of going home wondering if it was worth the time and trouble.

Very few would claim that this is the best format. Many groups have tried to modify it in the search for something better; they have had no success to advertise. However, they handled the problem the standard way that problems are handled in government and industry. The solutions are but patch-ons. They don't get to the heart of the problem. This is the way it will always be; in government, industry, and professional societies. That is, unless Value Analysis is applied.

Why not search out the primary functions of a professional society. Let's strip off the patches and the secondary functions. Let's try and determine the basic functions that a professional society should be serving. One way to do this would be to examine the original professional society before it developed into a mass of patches and secondary functions. First, we must find the original society, and then go back in time to examine it. This may not seem possible, but maybe we can do it.

The first American professional society was the brainchild of Benjamin Franklin. If Ben did the same good job on his Society as he did on his other innovations, we may find our primary functions where he writes about the Society in his autobiography. Ben was a natural value engineer. He could clearly see a need or a function, he had the natural ability to develop alternative methods, the wisdom to select the best alternative, and the tenacity to implement. That which we now call V.E. was natural for him when he developed many of his "firsts" - bifocals, stoves, weather forecasting, gulf stream charting, defining electricity, and many other including the professional society.

In 1727, when 21 years old, he founded this society that ultimately became the American Philosophical Society. He recognized the need for professional men to get together, determined how to fill that need, then formed his society. Following are some pertinent excerpts from that autobiography:

"...I had formed most of my ingeniour acquaintance into a club of mutual improvement, which we called The Junto; we met on Friday evenings. The rules that I drew up required that every member, in his turn, should produce one or more queries on any point of Morals, Politics, or Natural Philosophy, (science and engineering) to be discuss by the company; and once in three months produce and read any essay of his own writing, on any subject he pleased. Out debates were to be under the direction of a president, and to be conducted in the sincere spirit of inquiry after truth...."
Franklin then described the original members of his Junto, and they were a group very similar to us. He continued with:

"...It was the best school of philosophy, morality, and politics that then existed in the province; for out queries, which were read the week preceding their discussion, put us upon reading with attention upon the several subjects, that we might speak more to the purpose; and here, too, we acquired better habits of conversation, everything being studied in our rules which might prevent our desgusting each other. From hence the long continuance of the club, which I shall have frequent occasion to speak further of hereafter..."

Later in his autobiography, Franklin writes:

"...the Junto, was found so useful, and afforded such satisfaction to the members, that several were desirous of introducing their friends, which could not well be done without exceeding what we had settled as a convenient number, viz., twelve....I was one of those who were against any addition to our number, but, instead of it, made in writing a proposal that every member separately should endeavor to form a subordinate club, with the same rules....The advantages proposed were, the improvement of so many more young citizens by the use of our institutions; our better acquaintance with the general sentiments of the inhabitants on any occasion....and the increase of our influence in public affairs, and our power of doing good by spreading through the several clubs the sentiments of the Junto..."

"...The project was approved, and every member undertook to form his club, but they did not all succeed. Five or six only were completed...."

The Encyclopedia Britannica's discussion of Franklin and the Junto says, "...and in the following year (1744) the American Philosophical Society was functioning. It is often described as an outgrowth of the Junto."

Let's assume that the operation of Franklin's Junto served the basic functions of a professional society. Then, the questions that we should ask ourselves would include these:

**Question:**
What was the function of the Junto?

**Proposed Answer:**
To provide an enjoyable means for becoming informed and/or educated.

**Question:**
Could that be the primary function of our modern professional society (S.A.V.E.)?

**Proposed Answer:**
It should be one of the primary functions.

**Question:**
Why was the Junto membership limited to twelve, when we consider our meetings a failure if only attended by twelve?

**Proposed Answer:**

**Question:**
Why could the Junto "teach themselves" when we now seem to rely on "experts."

**Proposed Answer:**

**QUESTION:** Can we draw upon Ben Franklin's Junto to better use our Society for information and education? For anything else?

I posed these questions to many society members throughout the United States and the response was gratifying. We found that the challenges facing SAVE as a technical society were not unique, but coincided pretty much with those facing all other technical societies. How to compete with all the other demands for a members interest and time. How to provide a meaningful chapter/member relationship.

The results of the survey have been condensed into two logic diagrams:

Figure 1. How Chapters Should Function

Figure 2. How Members Expect to be Served by SAVE

Additionally, selected excerpts from the many responses are collectively displayed in Figure 3.

The outcome of the survey, I believe, is very clear. One, some innovative changes are necessary in keeping with the times. Two, society members are interested in the future of the society as a means of bettering our quality of life—and will find those innovative things that will make chapter meetings more meaningful.

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WHY

FUNCTION

HOW

CHAPTERS SHOULD FUNCTION
(AS SUGGESTED BY MEMBERS)

PRESENT NEW IDEAS

ESTABLISH MEETINGS FOR PERSONAL IMPROVEMENT

COVER RELATED & SUPPORTIVE SUBJECTS

SCHEDULE MEMBERS & ACQUAINTANCES FOR TALKS

PROVIDE MEETING FOR PERSONS OF COMMON INTEREST

REQUEST INPUT & COMMITMENT FROM MEMBERS

MAKE BETTER USE OF MEETING TIME

CURTAIL REHASH OF OLD INFORMATION

PROVIDE FORMAT FOR DEEPER STUDY

INTEREST OTHERS IN V.E. (Busy Executives) (Other Professions)

MAKE LEARNING EASY

CURTAIL BUSINESS MEETING

ADVERTISE

PROVIDE EXPERT SPEAKER

INCLUDE V.E. SUCCESS INFO IN MEETING ANNOUNCEMENT

CREATE SEMINARS

PRESENT NEW IDEAS

ESTABLISH MEETINGS FOR PERSONAL IMPROVEMENT

COVER RELATED & SUPPORTIVE SUBJECTS

SCHEDULE MEMBERS & ACQUAINTANCES FOR TALKS

PROVIDE MEETING FOR PERSONS OF COMMON INTEREST

REQUEST INPUT & COMMITMENT FROM MEMBERS

MAKE BETTER USE OF MEETING TIME

CURTAIL REHASH OF OLD INFORMATION

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MAKE LEARNING EASY

CURTAIL BUSINESS MEETING

ADVERTISE

PROVIDE EXPERT SPEAKER

INCLUDE V.E. SUCCESS INFO IN MEETING ANNOUNCEMENT

CREATE SEMINARS
“This relates to the business portion of our meetings and is stated based on many sad experiences. It is recommended that, if a business portion is a necessary portion of a meeting, that it be conducted after the speaker’s presentation. Really, I believe that with proper planning a business session need only be conducted every third or fourth meeting. Most announcements, etc., could and should be handled through a newsletter or equal.

We can teach ourselves if we but strive to stretch ourselves and not keep going over the same material time and time again. This teaching from self—experience, however, must be interwoven with experience and knowledge from other specialists both in and out of our profession.

It is my feeling our meetings should branch out to cover related subjects or supportive subjects. These subjects could include, but not be limited to, accounting practices, managerial techniques, human relations, creativity, theories of mathematics — Rene Descartes, advanced techniques/technologies, etc. We should even have some unrelated subjects of interest to the members’ wives.”

A.E. Mudge
Pittsburgh, Pa.

“Past experience as a member of organizations and talking with other members, it becomes apparent that the “active” members are those with responsibilities aimed at the organizations goals.

Perhaps each member should be charged with preparing a program for each meeting that would be of interest to the group. His research and ultimate delivery would be a challenge to him and of interest to the entire group and hopefully, all would benefit from it.”

R.L. Hambleton
East Moline, Ill.

“One of the best reasons to go to meetings of engineering societies and trade associations is to swap ideas with our fellow citizens. People with like occupations, interests and experiences like to “talk shop”. It is often comforting to learn that other people have the same kind of problems.

Often, more is learned in the halls and bars after the formal sessions than is passed over the podium by an expert who may not—too—subtly be pushing some special interest of his own.

If each member of a three cornered conversation throws in one idea everyone goes home with two more than he gave away. That sounds like a fair exchange.”

Jim Keebler
Tooling & Production Magazine

“I suppose we rely on experts (specialists) today for communication of current experiences because it is the fastest and most palatable way to keep informed. Both professional societies and industrial associations perform an important service in this area.

However, from my observation, little real progress is made as a result of such communication until we identify, and pursue to implementation, specific “projects” designed to advance the “state-of-the-art”. Like Ben Franklin’s practice in “Junto” these projects are always the “output” of small but dedicated groups — certainly less than 12 in number.

The social aspects of societies and associations are in my opinion merely the sugar—coating of the real “pill”. The basic content which makes the effort worthwhile consists of:

- Communication of facts (knowledge)
- Implementation of further progress.”

Phil I. Illarr
St. Louis, Mo.

“I agree that as a society we must do something to rekindle the interest of our inactive membership and attract new members to our ranks. We are like other professional societies in that our members are already familiar with the basic disciplines of the profession and are looking to the Society to expand their knowledge and their social contacts by association with others with a common interest.

Constant repetition of the basic principles and techniques at chapter meetings quickly results in a membership that is bored stiff. They apply these principles everyday on the job. What will interest them is advancements in technology, new areas of application, interesting case histories and the opportunity to discuss how these things could affect them.”

Robert W. Noth
East Moline, Ill.

“Most society chapter officers think an active chapter must have 10,000 members and a speaker a week. This begets a never ending spiral of more members, meetings, speakers, ad absurdum.

Fifteen years ago I could have had a meeting a day if I’d let it go that far, but I didn’t, just quit going altogether. When exceptional speakers or classes are presented, I attend the meeting. This has not resulted in any loss of “state of art”, but has left me with much more time to do my own work.

Didn’t Ben say “Don’t mistake activity for progress”?”

John C. Pierchoski
Ebensburg, Pa.
Ever since men first began to speculate about human nature, the question of man's motives has inevitably arisen. Why do people act as they do, what makes them decide on one course of action as opposed to another?

The term motivation is from the Latin root, movere, meaning to move or incite to action. Harriman says that motivation concerns the incentives, both intrinsic and extrinsic, which initiate and sustain any given activity; a complex and ambiguous concept to denote sustained, goal-directed behavior.

Motivation has also been described by Crow, as a general term, which refers to the regulation of an individual's behavior as inner needs or drives and environmental incentives stimulate him to satisfy his wants or needs or to strive toward the attainment of a desired goal. It has also been referred to as the specific experiences that people have which change the way they behave on the job. Gellerman feels that the term has different meanings for different people depending on the situations in which they find themselves.

The field of motivational psychology is a broad, complex field in the sense that motivation is intimately related to a number of other psychological processes. First, the psychology of motivation is concerned with those changing physiological states that are associated with hunger, thirst, sex, etc. Because of this, many of the early experimental studies of motivation were directed toward the investigation of the strength of drives in animals which are known to be related to bodily needs and physiological processes.

Second, emotional states are sometimes treated as motivation conditions. Psychologists have demonstrated experimentally that emotional states, through learning, can act as drives. Moreover, as common experience tells us, emotions often reinforce motives. When we strongly desire something, the accompanying emotional tone increases the strength of our desire to attain a goal.

Third, habits enter the realm of motivational psychology because of the fact that well-established habits can incite the individual to action. Habits are also thought to be at the heart of social motives. It is generally agreed that such motives as prestige, affection, the desire for possessions, security, and the like, are learned patterns of behavior, or as some authorities prefer to put it, culturally determined.

Fourth, sets, attitudes, and values are complex processes, compounded in part, by motivational factors and because of this motivational component are properly considered to be within the scope of motivational psychology.

MOTIVATION THEORY

by R. A. Haedge

Mr. Haedge is a Labor-Management and Employee Relations Specialist with the Department of Health, Education and Welfare in Dallas, Texas. He holds a B.A. in Psychology, an M.A. in Counselling Psychology and recently completed the requirements for a Masters in Public Administration (M.P.A.) degree.

A native Texan, he has had experience in mental health counseling, as a Social Work Officer and a Drug Abuse Rehabilitation Officer in the U.S. Army, and as a Consultant in Vocational Rehabilitation with the World Rehabilitation Fund, Inc. in Saigon, Vietnam.

This article by Mr. Haedge was awarded second prize in the 1976 NASS International Papers Competition. Its subject of motivation is one that is especially important to all. Motivation of suggesters, motivation of supervisors, motivation of evaluators and not to be forgotten - self motivation are all areas that should be of great concern to management.
Fifth, incentives and other environmental influences which play upon motivational processes are properly included within the scope of both theoretical and experimental studies of motivation. Lewin, for example, made incentives, and environmental conditions in general, an important aspect of his system of motivational psychology.

Leavitt and Pondy feel that motivation is a concept designed to account for the individual's tendency to respond differently to the same stimulus at different times and for different individual's tendencies to respond differently to the same stimulus. One's behavior is jointly influenced by his internal state and by the pressures of his environment.

**HIERARCHY OF NEEDS**

No paper on motivation would be complete without mentioning the work of Abraham H. Maslow. He feels that man is, basically, a wanting animal and rarely reaches a state of complete satisfaction, except for a short time. As one desire is satisfied, another pops up to take its place. When this is satisfied, still another comes into the foreground, etc. It is characteristic of the human being throughout his whole life that he is practically always desiring something.

Maslow felt that people tended to engage in those activities that they believed would satisfy unfulfilled needs. He proposed that human needs are arranged in sort of a hierarchy. If two or more needs are relatively unsatisfied, the person will engage in behavior aimed at satisfying the more fundamental of the needs. However, when two different patterns of behavior are available to a person, both can satisfy the need, Maslow's theory does not very well account for how the person chooses one behavior rather than the other.

Maslow also believed that the basic human needs are organized into a hierarchy of relative prepotency: when the basic physiological needs are satisfied, then at once other (and "higher") needs merge and these dominate the organism. And when these in turn are satisfied then still "higher" needs emerge, and so on.

The implication of the above is that gratification becomes as important a concept as deprivation in motivation theory, for it releases the organism from the domination of a relatively more physiological need, permitting thereby the emergence of other more social goals. It is precisely those individuals in whom a certain need has always been satisfied who are best equipped to tolerate deprivation of that need in the future; those who have been deprived in the past will react to current satisfactions differently from the one who has never been deprived.

Maslow says that there are at least five sets of goals which may be called basic needs: physiological, safety, love, esteem, and self-actualization.

Figure 1 portrays these basic needs of Maslow and show why the field of motivation is so broad and diverse. As one goes up the hierarchy there tends to be more and more overlapping and interaction between the needs, as represented by the broken lines. There is also a tendency for the needs to branch out and become more diffuse, as shown by the inverted triangle. For example, all individuals satisfy their need for food by eating some kind of food, but there may be countless way in which individuals attempt to satisfy their need for self-actualization. As we go up the hierarchy, the degree of specificity of satisfaction becomes much more broad and diverse. This has very important implications for those in the field of public administration, as will be pointed out later.

**URGES, NEEDS AND WANTS**

Sigmund Freud claimed that there are two primary urges in each individual, the life urge or libido, and the death urge or mortido, and that these covered the full range of human motivation. These two urges are fundamentally opposed to each other. This opposition causes much inner conflict and apparently contradictory behavior. For example, some things about a person's supervisor are likable, but sometimes he may be hated or disliked for other qualities he might display. Or, a person may want to have his own way, yet wish to retain the friendship of others who want different things. (See figure 2)

The libido and mortido are primitive yearnings, an unconscious source of motives and are the oldest parts of human nature. These urges, combined with biological needs and psychological wants, make people feel they need to do something, though they may not know what that something is. You can't put motives into people's heads, but you can alter a situation so that the mental brakes are released, and the previously developed inner motives have a chance. According to Laird, this is what motivation is about, helping others use their motives.

It may be helpful to visualize the interrelationships between urges, needs, and wants in motivating people as an atom. The pent-up energy in the central nucleus would be man's deep urges. These urges could be thought of as giving off invisible rays that influence the activities of the layers surrounding them.

Another way to conceptualize this idea is to think of motivation as a tree. The soil, which gives the roots their nourishment, is represented here by the deep urges. Depending on the soil, the roots may take up more love than hostility. The biological needs are represented by the roots, which start the energy-giving substances up the trunk of the tree. The psychological wants, which are represented by the limbs, thrive on the nourishment that comes up the trunk. But we also have to consider the climate which may frustrate this flow and effect the branches and their fruit. The climate comes from other people – the human climate of the home and workplace.

**MOTIVATIONAL MANAGEMENT**

We have examined theoretical concepts and definitions of motivation. We will now move on to the field of leadership and public administration and see how motivational theory has been integrated into the actual practice of management. We will look at several studies made by different authors in order to determine the validity of the various approaches concerning motivation and how they work when applied to the field of administration.

Speaking of motivation in the administrative context, Gellerman feels that it refers to ways of increasing or decreasing the probability that actions of which the individual is already capable, at least potentially, will occur. Further, it means ways of influencing behavior to which management has some feasible access.
Figure 1. MASLOW’S HIERARCHY OF BASIC HUMAN NEEDS

1. **Physiological**
2. **Safety**
3. **Love**
4. **Esteem**
5. **Self-Actualization**
The greatest advantage of MBO is that it makes it possible for a manager to control his own performance. Self-control means stronger motivation: a desire to do the best rather than just enough to get by. By "control" Drucker means the ability to direct oneself and one's work. Objectives are the basis of control. MBO allows organizations to substitute management by self-control for management by domination.

Today MBO seems to have become more popular in public service institutions than it is in the private sector. It is more discussed as a tool of the public administrator. Public service organizations always have multiple objectives and often conflicting, if not incompatible, objectives.

The basic philosophy underlying MBO is the idea of participative management, which is a goal-setting process that also blends in will with McGregor's Theory Y. Participative management is a process by which the subordinate gains freedom of choice with respect to his own responsibilities.

McGregor feels that, under the proper conditions, participative management provides encouragement to people to direct their creative energies toward organizational objectives and provides significant opportunities for the satisfaction of social egotistic needs. There has been criticism that these ideas do not work when put in actual practice. However, McGregor says that such failure can often be attributed to the fact that management "bought the idea" but applied it within the framework of what he calls Theory X and its assumptions.

Theory X is the term McGregor coined to represent the traditional view which management has that it consists of getting things done through the efforts of other people. It is based on the assumption that people need to be persuaded, rewarded, punished and controlled, and that their activities must be directed.

Theory Y is based on more adequate assumptions about human nature and human motivation. It says that people are NOT by nature passive or resistant to organizational needs. They have become so as a result of experience in organizations. The motivation, the potential for development, the capacity for assuming responsibility, the readiness to direct behavior toward organizational goals are all present in people. It is the responsibility of management to make it possible for people to recognize and develop these human characteristics for themselves. It is a process of creating opportunities, releasing potential, removing obstacles, encouraging growth, and providing guidance.

Along this same line, Herzberg feels that the only way to motivate employees is to give them challenging work in which they can assume responsibility. He talks about job enrichment which says that jobs should be enriched in order to bring about the effective utilization of people. He found that the generosity of fringe benefits has no effect on boosting worker's productivity nor on the worker's satisfaction with their jobs.

This is most likely because needs cease to play an active, determining, or organizing role as soon as they are gratified. Based on Herzberg's theory, Scott Myers did several studies at the Texas Instruments plant in Dallas which have significant implications for the field of motivation. Myers found that the factors in the work situation which motivate employees are different from the factors that dissatisfy employees. High motivation does not result from the improvement of the dissatisfiers, or hygiene factors as referred to by Herzberg, but dissatisfaction does result from their deterioration.

In another study, Myers found that the motivation of an employee at any level is strongly related to the supervisory style of his immediate boss, and the hierarchical level of his position. He says that sound motivational patterns must begin at the top of any organization. The motivation of managers is dependent on inter-personal competence, the opportunity to work toward meaningful goals, and the existence of appropriate management systems.

While the above may be satisfactory for the motivation of managers, we are in difficulty when considering what to do to motivate employees. The great majority of emphasis on motivation today is in the area of fringe benefits and other dissatisfiers which have not been found to contribute greatly to the positive motivation of employees. What can we say, then, concerning the motivation of the average employee?

**WHY EMPLOYEES STAY**

A recent study by Flowers and Hughes may offer some possible answers. They concentrated on why employees stay with an organization and found that people tend to remain with a company until some force causes them to leave. Like the concept of inertia in the physical science: a body will remain as it is until acted on by a force.

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**LIFE URGES**

(Preservation of race)

love
approach others
cooperation
encourage others
praise others
elation
creativity
sympathy
forgiveness
giving

**DEATH URGES**

(Preservation of self)

hate
withdraw from others
quarreling
discourage others
find fault with others
depression
destructiveness
anger
retaliation
taking

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Figure 2. LIFE AND DEATH URGES
They found that there were four factors that affect this inertia, two within and two without the organization. Within the organization there are the issues of job satisfaction, and the company environment and the degree of comfort that an individual feels within it. Outside the organization, there are the employee's perceived job opportunities in other organizations, there are the employee's perceived job opportunities in other organizations and nonwork factors that directly affect inertia, such as financial responsibilities, family ties, friendships, and community relations. They concluded that an organization will have to provide a work environment that is not only broadly compatible with the employee's personal goals, but also with their values for working and living.

It would seem, therefore, that when considering motivation of employees, we must go beyond the job environment and deal with areas of life that are not directly related with their jobs. If this is the case, then what kind of manager is needed in order to provide for the proper motivation of these kinds of employees?

Tannenbaum and Schmidt found that the successful leader is one who is always keenly aware of those factors which are most relevant to his behavior at any time. But sensitivity is not enough, he must be able to behave appropriately in the light of his preceptions. They found that the successful manager of men is one who maintains a "high batting average" in accurately assessing the forces that determine what his most appropriate behavior at any given time should be and in actually being able to behave accordingly.

SUMMARY

This then is the key: knowing what to do in each situation and being able to do it. The field of motivation is so very broad that it is impossible to derive a single theory that will answer all of the questions or address all of the problems. The human organism is a very complex organization. There are untold numbers of variables that are acting on different individuals every minute of the day. To be able to account for them all is impossible.

The most effective way to motivate people is to remember that you are dealing with people and that just as no two people are alike, no two office situations are alike. We must, therefore, treat each person and situation as unique. In some instances Theory Y might work, while in other cases MBO may be the most effective method.

If managers are to be successful, they must first know what options-theories of management, are open to them; they must be insightful enough to realize what situation calls for what action and then they must be able to actually follow through with their action. Only then will we have the conditions present which will allow for the proper motivation of employees.

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Position Wanted

Certified SUGGESTION SYSTEM ADMINISTRATOR seeks challenge of setting up new, or revitalizing existing, Suggestion Plan. Six years of experience includes originating and managing suggestion and zero defects programs for multi-plant company. Has authored article published in professional journal, served as a Director of the National Association of Suggestion Systems, and has instructed at the Suggestion System Administrator's Academy in Evansville, Indiana for past two years. One and one-half years completed toward LLB degree. Please reply to Box A, National Association of Suggestion Systems, 435 North Michigan Avenue, Chicago, Illinois 60611.
PARING THE FAIRING

by Larry Davis

Man through the ages has generally advanced. The pros and cons of this statement could be discussed at great length, however the technological explosion of recent years continues to increase at a rapid rate. What applied one or two years ago could be obsolete today or at least there could be a better method available.

Although keeping abreast of recent technologies requires concentrated efforts, the outcome can be very rewarding.

I would like to share with you the experiences of our VE/VA team following investigations into a recent development in the forming of titanium sheet.

The historical aspects of this exercise takes us back to 1972 when the Minuteman missile project saw the introduction of the Titanium Shroud; see Figure 1.

There have been several successful exercises conducted on the Shroud; however, we will concentrate on one of these which is the “In Flight Disconnect” (IFD) Titanium Fairing, shown in Figure 2.

The engineers and designers concerned with the I.F.D. Fairing did a very good job in the circumstances at that time. The accepted practice in those days was to hog out material from raw stock in many instances when complex titanium parts had to be manufactured.

The subject Fairing met the required specifications although the Value Engineering component considered the cost to be high. This opinion was formed after scrutinizing the Minuteman Shroud computer cost runs.

In 1975 one of our training course graduates contacted the VE office and reminded us that there had been great advances in manufacturing techniques relative to the production of titanium parts. He then suggested that a worthwhile project would be the I.F.D. Fairing. We were already aware of the high cost of this part and readily agreed to establish a selected team that would meet one day per week over a one month period.

A few weeks later our workshop team recommended a recently developed manufacturing technique that resulted in a Value Engineering Change Proposal approval with a 92% cost reduction with no reduction in performance.

The remainder of this article covers the step-by-step application of the Job Plan and our interpretation of Charles Bytheway's “Function Analysis Systems Technique”.

THE INFORMATION PHASE

The I.F.D. Fairing is installed on the outer surface of the Minuteman Titanium Shroud, located at the base.

We see in Figure 3 an exploded pictorial view of the assembly details.

The In Flight Disconnect component itself is not specifically included in the scope of our exercise; however, we must take into account that this component is subjected to high temperatures during the early flight stages. Without thermal protection the system would fail to operate thereby preventing separation of the Shroud assembly.

The In Flight Disconnect component features an electro/pyrotechnic device which when operated releases the
Separation Clamp Ring around the base of the Titanium Shroud. The Separation Clamp Ring assembly is then blown away from the outside of the Shroud skin thus allowing the associated rocket propulsion motor to effectively separate the nose or shroud from the Minuteman Support Payload Bulkhead.

The In Flight Disconnect thermal insulation is achieved via a cork insulator which assembles into the Fairing recess. The cork ablates during the flight and also requires protection, which is achieved by incorporation a ramp on the Fairing thereby diverting the air flow. Another requirement is for the I.F.D. Fairing to interface with the Separation Clamp Ring Fairing. This interface is accomplish by welding a titanium sheet flare in two positions to the main body of the Fairing. The Fairing body also incorporates six threaded inserts for the purpose of attaching the assembly to the outer skin of the Minuteman Shroud.

Although a balance of 300 I.F.D. Fairings still remained on the production run a major systems redesign would have required qualification testing. This would substantially reduce the potential cost savings as a result of complex development and implementation requirements. We decided to concentrate mainly on a producibility redesign.

Let us now take a more detailed look at the I.F.D. Fairing itself. Figure 4 shows us the manufacturing sequence prior to VE.

A solid titanium plate is machined and then split into two parts, i.e., two fairings are manufactured from each plate. The flare sheets are then welded to each side of the body for the purpose of interfacing with the Separation Clamp Ring Fairing.

A total of six sizes of end milling cutters are used for the profile machining. These end mills wear out rapidly.

We remind ourselves that the objective of this exercise is
to reduce manufacturing costs.

The next step is to develop a fast diagram and then add costs against the functional blocks.

Following several hours of listing possible functions and considering the HOW/WHY relationships we developed our interpretation of the I.F.D. Fairing FAST diagram; see Figure 5.

Structuring a FAST diagram is an excellent way in which to obtain a better understanding of the objectives of the exercise and to understand the details of the project. The functions on the left hand side of the FAST diagram are concerned with the systems aspects. We decided to accept the existing method of diverting air in consideration of the qualification of flight tests that would be required in the event of a systems redesign and consequently wipe out the potential savings. We did however decide to major systems redesign recommendations for possible future research application.

The function near the middle of the FAST diagram deals with the installation which shows a cost of four dollars. Our team would not achieve large savings by concentrating on this block.

We concluded that the Creative Phase should be concerned with the producibility redesign of the I.F.D. Fairing; in other words the functions on the right hand side of the FAST diagram.

The material, tooling and labor recurring costs including overhead and other adders total five hundred dollars for each Fairing installed.

Before completing the Information Phase estimated the Functional Worth. Following several suggested costs by the team members and comparing similar items we decided on a Functional Worth of fifty dollars for each installed I.F.D. Fairing.

At this point we were anxious to start the Creativity Phase; however, we carried out one more exercise which is shown in Figure 6. This graph indicates an approximate break-even point assuming a development and implementation cost of roughly five thousand dollars changing the producibility design of the I.F.D. Fairing.

With the Functional Worth estimate of fifty dollars plotted against the existing I.F.D. Fairing cost of five hundred
dollars for each unit we see that the break-even point would occur after approximately eleven units. In consideration of a remaining quantity of 300 I.F.D. Fairings the continuation of our exercise appeared to be well worthwhile.

CREATIVITY PHASE
Over 100 suggestions were generated during a three hour session of free flowing ideas, and are too numerous to detail here.
Let us instead, review the evaluation methods used in this exercise.

EVALUATION PHASE
All ideas were discussed briefly with one of three categories allocated:

- USABLE (U)
- UNUSABLE (UN)
- FURTHER INVESTIGATION (FI)

Following this procedure which effectively & efficiently examines the list, approximately 75% of the list dropped out. Before scrapping ideas we tried combining various ideas thereby on occasions forming a new idea. If this did not work then the ideas were discarded leaving a few potential proposals on which to concentrate our efforts.
A very small part of our speculation list follows with the evaluation categories indicated:

CASTING (U)
FORGING (U)
RECESS COMPONENT (FI)
STAMPING (U)
GLASS (UN)
CHANGE INSULATOR MATERIAL (FI)
COAT INSULATOR (FI)
FEWER PARTS (U)
and so the list goes on.
Following a detailed evaluation utilizing measurement by weighting methods similar to the COMBINEX system, we chose stamping as our recommendation.

IMPLEMENTATION PHASE
The choice of stamping techniques brings us to the main thrust of this article. That is - try and include recent technological advances in your lists of speculation.
In this particular exercise we were informed by our systems engineers that the I.F.D. Fairing material -titanium, had been established following investigations into a large number of alternatives. The stringent flight requirements included weight, temperature, strength and stress. Titanium came out at the top of the list.
Although we challenged this decision we also discovered great benefits by developing a titanium sheet stamping.

In recent years it has become possible to successfully stamp titanium sheet by heating the material and also heating the tool die prior to, and during, the stamping operation.
Funding was authorized by the VE component for the purpose of developing the tooling by a selected specialist in our General Electric production plant. One month later a one piece stamping manufactured from 0.050" sheet titanium was produced.
This design features a change to the I.F.D. Fairing fastening method. Installation to the Minuteman Shroud outer skin is now accomplished by rivets instead of screws and inserts. The design prior to VE included eleven parts as compared to the new one piece design.
The next stage was for our systems, stress and thermal engineers to analyze the new Fairing. The only objection came from thermal engineers who claimed that one of the corner radii would create turbulence and introduce a hot spot in excess of the requirements. We asked how this problem could be overcome, whereupon we were informed that a smaller corner radius might be acceptable. Additional funding was supplied for further analysis which resulted in the establishment of a maximum permissible radius. We feared that in order to meet this requirement that a two piece Fairing would be needed. Our manufacturing people did an outstanding job; however, and managed to modify the tooling to provide an acceptable radius and still retain the one piece part.
Figure 7 shows the approved and implemented VECP design which is now in production at a total cost of thirty eight dollars. When compared to the previous cost of five hundred dollars represents a 92% cost reduction.

Figure 8 shows steps in the manufacturing sequence starting with a flat sheet of titanium cut oversize to the general configuration followed by the hot forms piece as it comes out of the single pass press. It is then trimmed to size. The last view shows a sample one-piece titanium I.F.D. Fairing assembled to a simulated shroud and illustrating a satisfactory fit with the cork insulation. The one-piece I.F.D. Fairing provides a 0.4 pound weight reduction over the machined Fairing.

There is usually an exclamation of surprise when it is learned that the material cost of the new design is zero. This occurs by utilizing scrap sheet recovered from the Minuteman skin blanks.

CONCLUSION

One important aspect of a value engineering program is whether or not effective results are being achieved and recognized.

In the case of the I.F.D. Fairing a net savings of nearly $150,000 has been achieved to date, according to published figures by the General Electric RESD Finance Office.

We don't want to leave the story there. If the investigation of a recent technological advance has paid off handsomely for just one project, we look forward to conducting many more similar exercises.

In addition, we have found a substantial increase in the number of proposals successfully implemented, by involving the project people concerned in the VE/VA exercises and giving these people credit when justified. With this type of policy where the VE/VA component acts as a sort of catalyst we have experienced a marked improvement in the reputation and professional image of the Value Engineer/Analyst.
OF AN EMPLOYEE SUGGESTION PLAN

Would You Believe, in Four Months!

by Ron Chase

Mr. Chase is assistant General Manager of Southam Murray Printing in Toronto, Ontario, Canada. He is married, with two children. Born in London, England, he is a graduate in Economics from London University. He came to Canada in 1962 and has been with Southam Murray Printing for six years.

Southam Murray Printing is a large printing company, offering complete printing services, situated in the northwest sector of Toronto, Ontario. Approximately six hundred people are employed, comprised of both plant and office personnel. The plant is completely unionized, consisting of nine unions. During the past twenty years, Southam Murray has enjoyed the reputation of being a leader in the printing industry, exhibiting a high degree of stability.

Recently, new management has assumed responsibility and has introduced a participative style of management. A result has been a closer relationship with the employees, and a high degree of mutual trust.

Different ways of improving profits, productivity, job performance and job security have and are continuing to be explored. The merits and possible benefits of introducing a Suggestion Plan was high on the list of possible improvements. Initially, members of senior management met to discuss the subject and the following guideline for establishing a Suggestion Plan were agreed upon:

- Suggestion Plan Management would be solely a management responsibility.
- It would not become part of any union contract.
- Management support would be one hundred percent.
- The assignment for administering the Plan would be handled by one person.
- A startup date was established.

RESEARCH

No information relating to Suggestion Plans was available in company files, consequently a first step was to determine whether an association concerned with Suggestion Plan administration existed.

Inquiries led us to the National Association of Suggestion Systems in Chicago, Ill.

Along with this, we were able to locate local resources, experts in the field, who provided invaluable information and counsel on how to begin.

While this phase of the research was progressing, application was made for full membership in NASS. After intensive review of the available material, another senior management meeting was held and it was decided to proceed with the introduction of a Suggestion Plan. A final target date was established for introduction of the new plan.

SUGGESTION PLAN DESIGN/FORMAT

A Flow Chart was created to ensure that the target date would be met. The main objectives of the new Plan were:

- To provide an incentive for the employees to submit ideas.
- To provide a financial return to both the Company and the employees.
- To improve employee attitudes by focusing attention to the positive aspects of their jobs.

In addition the plan was to be simple to understand and to administer.

In reviewing other Suggestion Plans it appeared that too much emphasis had been placed on various forms, booklets, and manuals.

It was therefore decided to inaugurate the Plan with a single part suggestion form, an employee booklet, and a Supervisors Manual. These were purposely concise and easy to understand. When addi-
tional copies of suggestion forms were required, they would be machine duplicated. This approach would allow us needed flexibility in later forms design.

The printed materials for the Suggestion Plan included:

- Employee Booklet
- Supervisor Manual
- Suggestion Form (single-part)
- Investigation Form (single-part)
- Master Record File
- Employee Record Card
- Suggestion Calculation Form (single-part)

Rough drafts of the booklet and the manual were written and circulated to senior management for their approval and comments.

a) Union President - a personalized letter explaining the new plan and a copy of the Suggestion Plan. We felt this was extremely important to keep the top union officials informed.

b) Suggestion Plan Committee - final briefing session was planned and executed.

c) Supervisors/Managers/Union Representatives were invited to a special seminar - for the purpose of explaining in detail, the provisions of the Suggestion Plan. Manuals were distributed at this meeting.

d) Six Suggestion Plan Boxes were installed in various locations throughout the plant and office areas.

e) Employee Suggestion Plan Booklet and a letter of explanation to employees accompanied the weekly pay checks on the selected date.

FOLLOW-UP SYSTEM

To help ensure the success of the Suggestion Plan, the day-to-day administration of the Plan is considered extremely important. Several basic steps were established although special exceptions might be made, occasionally through the Suggestion Committee.

1) Daily. The six Suggestion Boxes must be emptied. The supply of Suggestion Forms/Envelopes is to be checked and replenished as necessary so forms are always available.

2) Immediately after collection, completed Suggestion Forms are to be delivered in persons, not by internal mail, to the Suggestion Plan Administrator.

3) Each Suggestion Form is to be reviewed for: name, department, and signature. If name is omitted, Suggestion Form is invalid and will not be processed.

If department is missing, it should be determined. If signature is omitted, it should be returned to the employee for signing, after entering in Master Record file.

4) The pertinent information is entered into the Master Record File ledger and on individual employee record cards filed alphabetically.

5) Idea receipt is acknowledged, by letter to the submitter.

6) Suggestion Administrator reviews the suggestion to ensure that the idea is understood and contains enough information for investigation purposes. Suggestion Administrator then forwards the ideas to the individuals who are required to assess the suggestion. Control data is recorded and checked periodically in the Master Record File.

7) All suggestions are reviewed by the Suggestion Committee which meets bi-weekly.
Basically the suggestions fall into three categories:

A) Those not accepted. Reasons for non-acceptance will be reviewed. The administrator replies in writing to the suggester, explaining reasons.

B) Those accepted, but pending implementation. Committee attempts to establish implementation date. Administrator advises suggestor, in writing, that suggestion is pending implementation.

C) Those accepted and implemented. The cash awards are reviewed. Administrator advises suggester of the amount of the award, in writing.

8) Idea resolution is then recorded in the Master Record File and on the Employee’s Record Card to maintain complete records.

9) Details of Suggestion Awards are given to the General Manager and appropriate managers for review and possible action.

10) Monthly, an information chart located at the Main Plant Entrance displays important statistical information concerning Suggestion Plan performance. In addition, the company Newsletter contains regular updated reports highlighting award winners.

CONCLUSIONS

As an organization we are not yet in a position to comment on the degree to which our Suggestion Plan is successful. However, we are proud of our accomplishment in implementing this complex and important program in such a short time span - four months.

By developing a plan that is relatively simple and free from complexities, we are in an ideal position to make necessary adjustments should the need present itself.

Our thanks are directed toward the National Association of Suggestion Systems, Mr. Alex Hendry of General Motors of Canada Ltd. and to Mr. Gord Berner (C.S.S.A.) of Dominion Foundries & Steel Ltd. for the assistance they provided.

Note: The views and comments of the author do not necessarily constitute the endorsement or opinion of Southam Murray Printing.
BACK COVER: Group pictures of attendees representing all functional areas.

PEP is the name symbolizing the cost improvement effort at the Mining Machinery Division of Joy Manufacturing Company which encompasses Value Engineering, Value Analysis, Design to Cost and the Idea program.

One unique aspect of the program is the recognition awards dinners which are held semi annually to recognize individuals who participate in the effort. Nearly 400 employees attended the May dinner.

BELOW: Mr. Carl R. Heinz, Group Vice President and General Manager, Joy Manufacturing Company presenting an award to James Sporer, Assembly Floor Inspector.