

# PUTT'S LAW AND THE SUCCESSFUL TECHNOCRAT

BY

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billion-dollar industry that has transformed the methods of business throughout the world.

What objectives should have been set for the management of IBM back in 1952? And what would have happened to the computer industry if these objectives had been followed?

About 1877, George Eastman, a young bank clerk in Rochester, New York, began to plan a vacation in the Caribbean. A friend suggested that he take along a photographic outfit, which he discovered, to his dismay, was really a cartload of equipment that included a lighttight tent and other cumbersome objects. Field photography, in those days, required a person who was part chemist and part contortionist; with "wet" plates, there was chemical preparation immediately before exposure and development immediately after—no matter where one might be.

Eastman gave up his trip and began studying photography. Working at night in his mother's kitchen, he began experimenting with dry plates and developed a process which he patented in 1879. In 1880 Eastman began to manufacture dry plates commercially—a venture that led to the founding of the Eastman Kodak Company in 1892. The rest of the story is familiar to all.

If George Eastman had been effectively managed by objectives, we can only assume he would have gone on the planned vacation to the Caribbean and have taken many photographs, which long since would have faded from memory.

From these cases and many, many others, the Second Law of Innovation Management emerges:

*Management by objectives  
is no better than the objectives.*

Management by objectives would have been easy for Edison. He understood his own objectives, and he never had to work within an innovative bureaucracy. This is just as well, for there is good reason to believe he would not have been able to accomplish nearly so much.

Yet Edison, more than any other person, may be responsible for the development of large organizations whose sole function

"The arithmetic is okay," he said, "but that's all it is—arithmetic. This company didn't get where it is through arithmetic. It got here through imagination, hard work, and taking risks. Men smart enough to come up with ideas like this proposal can also come up with better ways to implement it than has been assumed by our new director of advanced development. Put those men into an aggressive product development group like mine and you can throw out all that arithmetic."

After further discussion, the other corporate officers agreed. The analysis indicated there was risk, but it did not rule out the possibility of some success. Management, after all, was paid to take risks—and in this case, they would. The program and several of Ziegler's best people were transferred out of his area and placed under the director of product development. The program was initiated rapidly and had full support of all the officers of the corporation.

X. Y. Ziegler's failure to find support for his recommendation resulted from his failure to consider the costs and benefits to the decision-makers, as well as to the company. The question of *who* benefits is all important in any practical cost-benefit analysis. In making decisions, decision-makers are generally concerned primarily with the costs and benefits to themselves. This is clearly stated in the Fifth Law of Decision-making:

*Decisions are justified by the benefits to the organization, but they are made by considering the benefits to the decision-makers.*

In time, a number of difficult technical problems arose that had been predicted by Ziegler's original evaluation. To solve these, he and his remaining people were placed under the supervision of the director of product development. The president of Solid Status Electronics simultaneously announced the elimination of Ziegler's previous position of director of advanced development. That function, he explained, was now contained within the product development group.

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technology growth industries that many people believe IBM really stands for *I've Been Moved*.

While frequent reorganizations are beneficial to technocrats who have laid the groundwork for their own promotions, moving people around, or reorganizing, has at least one major failing, namely, acceleration of the rate at which positions are created or changed also accelerates the rate at which the hierarchy moves toward the *competence inversion* predicted by Putt's Law. Thus, if avoiding stagnation is the goal, other methods must be found.

According to William Shockley, cowinner of the 1956 Nobel Prize in physics, the capability differences among workers in scientific laboratories become larger exponentially, as one moves up in the scale of productivity. It is thus most important to motivate the best workers as effectively as possible. Peter Drucker, however, states that "we know nothing about motivation—all we can do is write books about it."

This leaves management with only one alternative for improving productivity. They must fire the least productive workers. This is technically referred to as *getting rid of the deadwood*.

A variety of approaches are available, but the most common one is to fire 5 to 10 percent of the work force every year—presumably from the bottom. Because it works so well in theory, it is frequently employed in practice. Ambitious technocrats must, therefore, be prepared to protect their own interests if such firing policies are adopted.

### **GOOD FIRING PROCEDURES**

An excellent procedure for meeting arbitrarily established firing goals is to hire some people each year with the intent of firing them the next. This avoids the unpleasantness of firing associates of long standing and helps to build a good manager-employee relationship among the "regulars."

A more sophisticated method is available that also addresses one of the greatest concerns of many well-established technocrats. The concern is that they will be replaced or bypassed by

in the hierarchy. If you are a member of the bottom group ( $P_B$ ) and you have a good idea ( $I_g$ ), then its value is only  $I_g P_B$ . This is of less value than practically any other idea in the hierarchy. However, if you can gain the support of a person ranked  $P_3$  or  $P_2$ , or best of all,  $P_1$ , then your idea will have great value. Because highly ranked people are too busy being prestigious to generate ideas of their own, you will be surprised how readily they will "admit" to having helped create yours.

#### *RATING SCHOLARLY PUBLICATIONS*

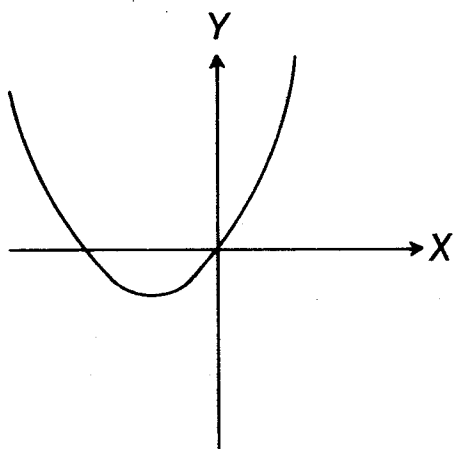
Another obvious application is in the publication of scholarly papers. All other things being equal, a paper with three authors is superior to a publication with only one or two authors. After writing a paper, it is thus worthwhile to find a prestigious person who is willing to become a coauthor. Such persons are generally too proud to respond favorably to such a crass invitation as the following: "Please let me place your name on my paper as a coauthor. This will help me get recognition and also help you because you are much too busy now to write original papers yourself."

It is far better to try a subtle approach, such as asking the person to comment on the paper. Then note that his comments have been so significant and helpful that you believe he should be a coauthor. Few men of position can resist an offer like this.

It is generally not wise, however, to load your paper with authors of equal or lesser rank just to raise its value. While the value of the paper will go up, the fact that this value must be shared among all the authors will far outweigh the benefit to you. However, if you can get one or more colleagues to agree to include you on their papers as a coauthor, if you do the same for them, then there is a definite gain for all.

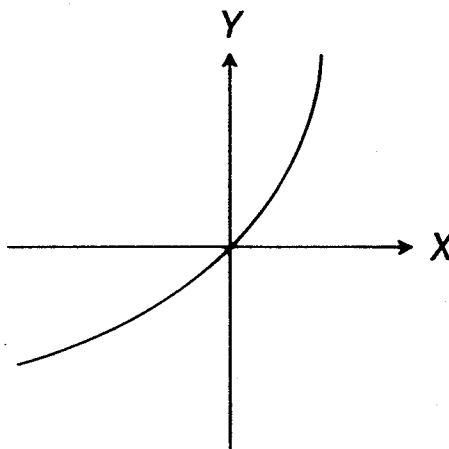
In addition to the prestige of the authors and number of them on a paper, there is yet another way to measure a paper's value without trying to read and understand it. That method is to see how many subsequent papers refer back to it. This system has become so popular in recent years that several computer pro-

## PUNISHMENT-REWARD SYSTEMS



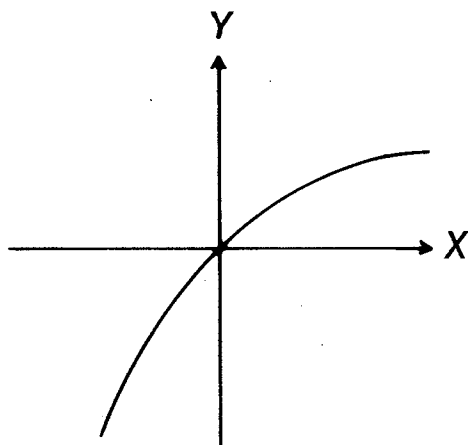
$$Y = -a + b(x + c)^2$$

**INNOVATIVE**



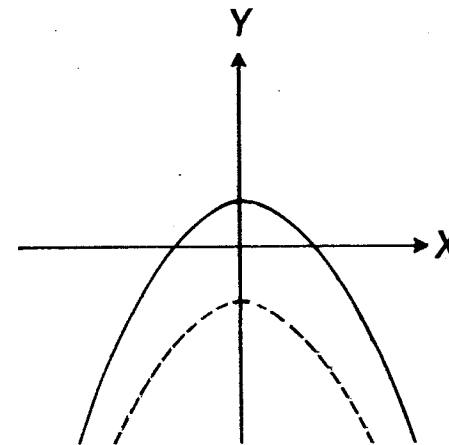
$$X = 1 - e^{-Y}$$

**AGGRESSIVE**



$$Y = 1 - e^{-X}$$

**CONSERVATIVE**



$$Y = a - bx^2$$

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*Whenever a computer can be blamed, it should be blamed.*

Yet useful as the aforementioned parallels are, they are not completely satisfactory. For no matter how skillful one is in placing the blame, it is never good to be the messenger bringing bad news to the king.

What is needed is a fundamentally different approach to Murphy's Law. This is now available through a logically necessary and consistent corollary that has been developed following years of research by the author. It is modestly known as Putt's Corollary to Murphy's Law:

*If nothing can go wrong, it will go right.*

But are there ever times when nothing can go wrong? The answer is, "Yes, there are such times." Nothing can go wrong anytime it has *already* gone right.

To be successful, technocrats must therefore work to be the *first* to know. They must have trusted informers. And they must subdivide all activities that report to them, so that they, alone, will have all the facts. Only then can they *predict*, with confidence, when it is that nothing *will* go wrong.

Whenever Putt's Corollary to Murphy's Law applies, you will meet the truly successful technocrats. They orchestrate the event, report the action, and modestly refuse credit—except for the outcome. To join their ranks, you need only learn to do the same.

## Putt's Canon

### PUTT'S LAW

*Every technical hierarchy, in time, develops a competence inversion.*

### COROLLARY

*Technology is dominated by two types of people: those who understand what they do not manage and those who manage what they do not understand.*

### FIRST LAW OF CRISES

*Technological hierarchies abhor perfection.*

### SECOND LAW OF CRISES

*The maximum rate of promotion is achieved at a level of crisis only slightly less than that which results in dismissal.*

### LAW OF FAILURE

*Technology abhors little failures but rewards big ones.*

### COROLLARY

*If you must fail, fail big; or, failure to fail fully is a fool's folly.*

### FIRST LAW OF INNOVATION

*An innovated success is as good as a successful innovation.*

### SECOND LAW OF INNOVATION

*The true measure of success in innovative projects is the size of management's reward.*



## THIRD LAW OF INNOVATION

*Innovation may be the goal, but technology transfer is the business of technical hierarchies.*

## FIRST LAW OF INNOVATION MANAGEMENT

*Change is the status quo.*

## SECOND LAW OF INNOVATION MANAGEMENT

*Management by objectives is no better than the objectives.*

## THIRD LAW OF INNOVATION MANAGEMENT

*A manager cannot tell if he is leading an innovative mob or being chased by it.*

## FOURTH LAW OF INNOVATION MANAGEMENT

*Stay in the pack until the objectives are clear.*

## FIFTH LAW OF INNOVATION MANAGEMENT

*Rejection of management objectives is undesirable when you are wrong but unforgivable when you are right.*

## FIRST LAW OF ADVICE

*The correct advice to give is the advice that is desired.*

## SECOND LAW OF ADVICE

*The desired advice is revealed by the structure of the hierarchy, not by the structure of the technology.*

## THIRD LAW OF ADVICE

*Simple advice is the best advice.*

## FOURTH LAW OF ADVICE

*When in doubt, form a task force.*

## COROLLARY

*When doubt persists, establish a committee.*

**S-CURVE LAW**

*All progress in technology follows an S-curve.*

**FIRST LAW OF SURVIVAL**

*Survival is achieved through risk reduction.*

**SECOND LAW OF SURVIVAL**

*To get along, go along.*

**THIRD LAW OF SURVIVAL**

*To protect your position, fire the fastest rising employees first.*

**LAW GOVERNING THE VALUE OF IDEAS**

*The value of an idea is measured less by its content than by its compatibility with the hierarchy in which it is pronounced.*

**LAW GOVERNING THE VALUE OF TECHNICAL PUBLICATIONS**

*The value of a technical article, when first published, is proportional to the sum of the prestige of its authors, but its ultimate value is proportional to the number of references to it.*

**LAW OF RISK-TAKING**

*Reward big failures and big successes; punish small failures.*

**LAW OF STAGNATION**

*Organizational stagnation occurs when the punishment for success is as large as for failure.*

**FIRST DP USER'S LAW**

*To remove doubt from your actions, invoke a computer solution.*

**SECOND DP USER'S LAW**

*Attribute successes to people and problems to computers.*

**DP SUPPLIER'S LAW**

*All systems and software projects take longer than estimated.*

**PUTT-BROOKS LAW**

*Adding manpower to a late technology project only makes it later.*

**LAW GOVERNING THE EFFICIENCY OF HIERARCHIES**

*The efficiency of a hierarchy equals that of a single group raised to the power of the number of levels in the hierarchy.*

**PARALLELS TO MURPHY'S LAW**

*Anyone else who can be blamed should be blamed.*

*Anything that can go wrong will go wrong faster with computers.*

*Whenever a computer can be blamed, it should be blamed.*

**PUTT'S COROLLARY TO MURPHY'S LAW**

*If nothing can go wrong, it will go right.*