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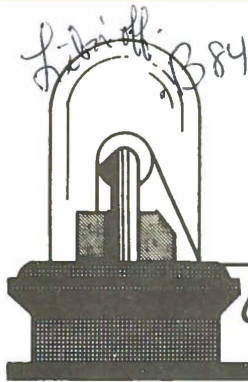
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Naval Postgraduate School

BUSINESS BAROMETER '71

Vol. IV, No. 5

MANAGEMENT AND O.A. DEPARTMENTS TO MERGE

At a Faculty Meeting on the afternoon of 2 February, Dr. Wally Creighton, Chairman of the Department of Business and Economics announced the prospective merger of the Departments of Business and Economics and Operations Analysis. While a name has not been given the new organization at this time, it will become effective this June upon the resignation of Dr. Creighton as Department Chairman. Dr. Creighton will resume his duties as Professor of Management at NPS following a highly successful two year term as Chairman.

Dr. Jack Borsting, presently Chairman of the Operations Analysis Department, will assume the Chairmanship of the merged departments. The purpose of this change is to lay the foundation for a more powerful and flexible curriculum, thus paving the way for the Navy Postgraduate School's ascendance into the ranks of the outstanding management schools in the country.

The present plans call for the continuation of separate curriculums for O.A. and Management students and of course the awarding of separate degrees. The ~~felt~~ consequences of the merger, however, point toward a more complete cross-fertilization of these areas of study. In a recent Barometer, Professor Paul Carrick analyzed the need for this very effort.

Dr. Creighton has agreed to meet with sections if further amplification of the merger is requested. Section Leaders are asked to make their appointments with Dr. Creighton's office for these meetings.

NAME SURVEY RESULTS

We have to date received a twenty-five percent return to the survey appearing in Vol. IV, No. 3 of the Business Barometer. This is a fairly respectable reaction to a survey of this type and we thank all those who cast their ballot.

Over half the respondents felt that the name "Naval Postgraduate School" was inappropriate. A list of the most popular titles in order of preference follows:

1. Naval Institute of Technology
2. Navy University
3. Naval Institute of Advanced Studies

"Naval Institute of Technology" was the overwhelming favorite.

It might be interesting to recount the reasoning of the voters. Many of those who thought the present title inappropriate assigned the cause to a perception that the present name does not convey a proper understanding of either the academic curricula or the student's efforts at this institution. Terms such as "image," "prestige," "misleading," "inadequate," "trade school," etc., were replete in the answers.

On the other hand, the minority who favored retaining the present name offered some logical arguments in their favor. Phrases encountered were: "our reputation depends on the quality of our graduates and faculty, not on the name"; "academic excellence"; "deeds not words"; "don't we have matters of greater concern?"; "frill only"; "snow job."

One reader pointed out that he thought Shakespeare was right, that names make little difference. Rationally, we agree. But is life pure reason?

ON MANAGEMENT BY COMPUTER DECISIONS

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Professor Carrick, in Vol. IV, No. 2, of BUSINESS BAROMETER '71 emphasized the use of OR (Operations Research) as a management tool. My feeling is that OR and computers are useful in aiding management but I wish to point out that a computer, operating on large numbers of data points can give inaccurate or totally incorrect solutions. For example, if a machine is to place the best straight-line fit through 10,000 data points by the well-known least squares method, the round-off error caused by millions of arithmetic operations can not only make the magnitude of the slope of the line to be in error but the sign of the slope may also be incorrect. A useful approximation can be made much more quickly by eye.

This means that computer results with a large number of variables, as in most management systems, coupled with large amounts of data to be fitted by linear relationships with manipulations for an optimum solution, can make the results meaningless and the cost exorbitant. Since one cannot predict the round-off error when applied to management problems with thousands of variables, human judgment must be relied on to arrive at a solution. The majority of present day computer problems involve few numbers and few arithmetic operations which yields satisfactory results but one should be dubious about extrapolating accuracy to multi-variable management problems that can only be tested by an expensive experiment.

My feeling is expressed by Koontz and O'Donnell, PRINCIPLES OF MANAGEMENT. Third Edition, Page 153:

"LIMITATIONS In enthusiastically embracing the potentialities of operations research the existing limitations should not be overlooked. So far, it has been used to solve only a limited number of problems.

In the first place, one is faced with the sheer magnitude of the mathematical and computing aspects. The number of variables and interrelationships in many business problems, plus the complexities of human relationships and reactions, apparently call for a higher order of mathematics than does even exploration of nuclear physics. The late mathematical genius, John Von Neumann, found, in his development of the theory of games, that his mathematical abilities soon reached their limit in a relatively simple strategic problem. However, it can also be said that managers are a long way from using the mathematics now available.

In the second place, although probabilities and approximations are being substituted for unknown quantities and scientific method is quantifying factors heretofore believed to be impossible to quantify, a major portion of important managerial decisions involve intangible and unmeasurable factors. Until these can be quantified, operations research will have limited usefulness in these areas, and selections between alternatives will continue to be based on nonquantitative judgments."

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