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COMPUTER PROGRAMMER MORALE

Pace University

D.P.S. 1984

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COMPUTER PROGRAMMER MORALE

Raymond J. Brusca

Submitted in partial fulfillment of the requirements
for the degree of Doctor of Professional Studies in the
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1984

This dissertation is dedicated

to my parents

Anna Claire Fitzgerald Brusca

and

Salvatore J. Brusca

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Abstract of a D.P.S. Dissertation

Raymond J. Brusca

COMPUTER PROGRAMMER MORALE

The problem undertaken in this dissertation was a study of morale among computer programmers. The specific problems were to determine whether organizational characteristics impede computer programmer task performance, to determine whether role demands imposed by the organization are in conflict with the role perceptions of computer programmers, and to determine the effect of this dissonance on computer programmer morale.

The data gathered in the course of research conducted in conjunction with this study are derived from questionnaires mailed to computer programmers and their managers, and from telephone interviews with several of the managers. Responses came from twenty-seven firms primarily in the New York City area, but also from several other states. The questionnaire used in this study was developed by the writer of this dissertation, following the basic format of the specific problems. The instruments used in the construction of the questionnaire were the Improved Climate Questionnaire (Form B) and Task Analysis Questionnaire, developed by Litwin and Stringer, and the Individual

Preference Study, developed by Zaleznik. Data from telephone responses were the result of informal, unstructured interviews with managers from seventeen of the twenty-seven firms involved.

Among the conclusions reached in this study are that computer programmers feel unduly hampered by the structure of business organizations, that tasks that programmers are required to perform are boring and prosaic, that standards imposed are perceived as unnecessary and inhibiting, that the reward structure is inadequate, that newer programmers are more unhappy than their seniors, and that there is a loss of personal identity in the larger firms.

In addition, programmers perceive their tasks as highly and primarily affiliative, as opposed to power or achievement oriented, programmers perceive themselves as special and independent and think that they should be treated that way, and, finally, that programmers have a negative feeling concerning their workplace, that is, programmer morale is low. Independent studies conducted on other professions, specifically engineers and accountants, also point to a growing morale problem among those groups.

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INTRODUCTION

Computer Data Processing is barely two decades old, yet for most institutions in the industrial, governmental, and not-for-profit sectors it has become the ingredient without which these institutions virtually could not function. As a concomitant to this burgeoning discipline, there has developed a new profession, computer programming, a profession whose members are still trying to find an identity and a niche in the organizational hierarchy. This study examines the effect of that effort on the morale of computer programmers.

THE PROBLEM

Statement of the Problem

The problem is to conduct a study of morale among computer programmers.

Specific Questions

The first question is to determine whether organizational characteristics impede computer programmer task performance.

The second question is to determine whether role demands imposed by the organization are in conflict with the role perceptions of computer programmers.

The third question is to determine the effect of any demonstrated dissonance on computer programmer morale.

DELIMITATIONS

The data gathered in the course of research conducted in conjunction with this study are derived solely from questionnaire and telephone responses from managerial and computer programming staffs of twenty-seven firms. Chapter IV contains a list of these firms and also provides a breakdown of their industry mix. Though the majority are located in the New York City area, several other states, listed in Chapter IV, are represented.

DEFINITION OF TERMS

The following definitions will be used for the purpose of this study.

Computer Programmer refers to the technical worker who writes the many computer instructions required in any given system. The programmer's responsibilities include:

- The analysis of the detailed description of a system
- The preparation of the general flow chart of the individual programs

- The preparation of coding sheets
- The preparation of test data for each program and the compilation and debugging of each program
- The completion of system documentation in accordance with prescribed standards[1]

For this study the term Computer Programmer will also include the function of Systems Designer. In the strictest sense, however, the Systems Designer (some use the term Systems Analyst) has responsibilities in systems development that generally precede the work done by programmers, and in some cases, Systems Designers direct programming activity. Their responsibilities include:

- The preparation of a detailed description of the system
- The preparation of clerical and control procedures
- The development of testing approaches and test data
- Training of personnel involved in the new system
- Documentation of the system and system maintenance[2]

Dissonance refers to conflicts or inconsistencies which appear in important aspects of the relationship of the individual to the organization.

Morale refers here to the feeling that employees have concerning their workplaces. High morale derives

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[1]Leighton F. Smith, An Executive Briefing on the Control of Computers (Park Ridge, Illinois: Data Processing Management Association, 1972), p. 28.

[2]Ibid., p. 26.

from a sense of pride, enthusiasm and willingness shared by those in the same group or undertaking.

THE NEED FOR THE STUDY

On December 1, 1977, a seminar for Computer Center managers was convened by the City of New York. At that meeting, in the course of a discussion on computer fraud, Dr. Brandt R. Allen of the University of Virginia indicated that during his travels over the past several years, as both lecturer and consultant to business organizations, he had concluded that there are no more disgruntled employees as a group than those who work as data processing professionals.[3]

At a later session during the same conference, Mr. William E. Murray, a Data Security Manager for the IBM Corporation, enumerated many breaches of security and misuses of the computer. Almost all of these infractions, according to Murray, are carried out by computer programmers for the obvious reason that they usually have easy access to critical data, as well as the means and ability to amend these data, but, more importantly, because they appear motivated to perpetrate this malfeasance.[4]

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[3]The City of New York, Computer Security Seminar, held at Riverdale, New York, December 1-2, 1977.

[4]Ibid.

The paradox here is that on the one hand we have a brand new area of endeavor, an arena and a forum in which intelligent, creative people can utilize their talents and reap satisfaction, and on the other, gathering storm warnings which indicate that there is frustration and conflict.

J. Ernest Loomis, Vice President-Marketing at Fortex Data Corporation, a Chicago based software firm, states in direct terms that

> The strength of the software industry promises to have significant impact on the organization of internal computer staffs. Some internal staffs have fewer programmers today and others will have fewer programmers in the future. They may have no less people involved in supporting the computer, but certainly they will have fewer persons of the type generally classified as "programmer."[5]

This writer has a slightly different view than Loomis, while supporting his contention that the same number of staff will be required for computer support. It is the writer's view, and has been his experience, that as software is made more complicated and specialized, and is proliferated, then more "systems" programmers and fewer "applications" programmers will be required. Since in many organizations systems programmers are pure overhead, this shift (from applications to systems) has the effect of increasing the cost of a firm's computer activity and shifting the mix even further away from business orientation toward technical specialist, since systems programmers are usually more highly paid than applications programmers.

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[5]J. Ernest Loomis, "Software Explodes onto Scene from Switch-Controlled Start," Data Management, 15:2 (1977), 8-11.

Dr. Elias M. Awad, of Ball State University, recently conducted a research study among fifty programmers of a large petroleum company concerning the predictability of job satisfaction. An ancillary outcome of this project suggests an emerging trend of phasing out "in-house" programming as a profession, explained by the increasing availability and popular use of software packages, and pre-programmed, ready-to-use application packages provided by manufacturers and software houses, and the use of outside consulting firms.[6]

Lieutenant Colonel Lantz Balthazar, a chief of software development in the United States Air Force, voices concern that the human aspect of DP management is neglected compared to the emphasis placed on hardware performance and software sophistication. It is important, according to Balthazar, that

> The employee not feel lost in a crowd but that he or she is able to establish tangible identity with a particular element in one organizational echelon. Group identification and a sense of belonging are initial prerequisites for employee motivation and efficient performance.[7]

Norman Sanders, a well-travelled computer manager, presently Managing Director of Nor-Data Software Ltd. in

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[6]Elias M. Awad, "Prediction of Satisfaction of Systems Analysts and Programmers, " Data Management, 15:1 (1977), 12-18.

[7]Lantz A. Balthazar, "Designing Viable Motivation Devices," Data Management, 15:11 (1977), 13-15.

Trondheim, Norway, postulates a series of important needs in the organizational life of computer programmers, and among the most important is that programmers be presented with the opportunity to grow in stature and influence. Each programmer, according to Sanders, should have a career plan placed in his or her file, not a guarantee, but a tentative blueprint of milestones to be reached over the next several years. This will do much to keep the programmer on the payroll and morale at a high level.[8]

Colbert cites the effect in terms of boosted morale when programming managers outwardly acknowledge the contributions made by programming staff, and the corresponding decrease in enthusiasm when this recognition is not forthcoming.[9]

Common career problems encountered by data processing professionals were summarized in a recent edition of Data Management. Among them was the concern that company executives have yet to recognize and accept the information processing profession, that data processors fear being misunderstood by top management, that there is still prejudice against women in the field, that users just do not understand DP'ers, that it is almost impossible to

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[8]Norman Sanders, The Corporate Computer (London: McGraw Hill Book Company Limited, 1973), p. 77.

[9]Douglas A. Colbert, Computers & Management for Business (New York: Petrocelli Books, 1974), p. 392.