AN EXPERT SYSTEM PROTOTYPE FOR PERFORMANCE APPRAISAL OF MANAGERIAL COMMUNICATION

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A vital factor in the development of an organization's human resource is the performance evaluation, yet few management activities create the potential level of anxiety among all participants as does the process of performance appraisal of managers by their superiors. Common criticisms include favoritism, excessive subjectivity, and inconsistency among others. This paper examines the appropriateness of expert system technologies in evaluating one segment of managerial performance, that of communication skills. The expert system allows for the integration of the qualitative and quantitative aspects of performance assessment, while introducing the beneficial dimensions of increased objectivity, comprehensiveness, and consistency both across individuals and through time. A prototype expert system is offered that enables the non-expert end user manager to conduct a performance appraisal of a subordinate manager's communication proficiency. The system's early validation results hold promise of proving effective as an evaluation aid while potentially mitigating anxiety for all participants.

A critical factor in the proper use and development of an organization’s human resource is the performance appraisal. The search for objective tools that would enable performance evaluations to be made systematically and on a consistent basis can be traced to Bittner (1948). Despite the length of this noble quest, few contemporary management activities create the potential level of anxiety, among all participants, as does the process of performance evaluation of managers by their superiors. Major contributors to this anxiety creation are 1) the multiplicity of purpose inherent in any appraisal system that seeks to serve both the organization and its employees, and 2) concerns with the consistency of the assessment process, both through time and across participants.

McGregor (1960) summarized the diverse purposes of appraisals as:

1) Administrative: Appraisals permit an orderly and rational way of determining promotions, salary increases, transfers, terminations, and the like,

2) Informative: Appraisals supply data to management on the performance of subordinates, and to the individual regarding their superior’s perception of their strengths and weaknesses relative to their job expectations, and

Manuscript originally submitted March 6, 1990; Accepted September 13, 1990 for publication.
3) Motivational: Appraisals create a learning experience for subordinates that motivates them to improve their job performance.

Such worthy, yet multiple dimensions of purpose may contribute to varying perspectives of the evaluation process by the participants, and thus be a source of anxiety concerning the appraisal that needs to be resolved through confidence in the objectivity and consistency of the process itself. Unfortunately, such confidence by the participants is not naturally inherent in the process. The importance of comprehensive, objective, and consistent performance assessments grows as the organization’s human resources become more costly and more concerned with professional development (DeNisi & Stevens, 1981).

Not only does the appraisal process mirror the individual’s performance, but the process can be a major influence on an individual’s future performance and satisfaction. When performed objectively, accurately, and consistently, performance assessments will create an aura of fairness about the entire evaluation process and will give the managerial subject the proper signals with respect to interpreting the performance expectations of the superior. Yet, if performed within an atmosphere of imprecise expectations and standards, excessive subjectivity and/or inconsistency, they risk the encouragement of only short-term performance at the expense of long-term planning, the development of bitterness, rivalry and politics at the expense of teamwork. Moreover, not only does such an appraisal process necessarily bear a high opportunity cost in time and energy for both the rater and ratee, but poorly designed or instituted systems may create considerable distrust by the subjects as well as discomfort for those forced to sit in judgement of others.

A comprehensive assessment of managerial performance would include evaluations for numerous behavioral dimensions including, but not limited to: Job Knowledge, Problem Solving Ability, Staff Management, Other Resource Management, Service to Others, Communication Skills, Effectiveness of Results, and Attitude and Enthusiasm. Each dimension could be evaluated separately, with an aggregate assessment assembled from such components. The intent of this study is to investigate the appropriateness of expert system technologies in evaluating one such segment of managerial performance, that of “Communication Skills”.

The next section reviews current evaluation techniques as well as efforts to incorporate traditional Computer Based Information Systems (CBIS) into the process. The paper then seeks to create an awareness of the potential contributing role of an expert system. The prototype model is then developed, and finally, initial deployment issues are discussed.

**Literature Review**

Smith (1986) argues that most relatively successful performance appraisal systems incorporate detailed, accurate periodic job descriptions, specific performance criteria, periodic reviews, and rater training. Assessment of managerial performance is complicated by characteristics of the positions to be evaluated, often typified by non-routine, unprogrammable work, and the absence of a continual stream of identifiable outputs. In such managerial/administrative environments, where outputs are not directly measurable, performance appraisals can assess behaviors as surrogates for outputs. Such behaviors constitute the processes which contribute to output production and goal attainment. In principal, the rater observes behaviors that are job relevant, evaluates those behaviors, and weights the evaluations to arrive at a final rating.

Most performance appraisal methods adopt either a “traditional” approach based on analytic tools or a “collaborative” approach based on goals of personal growth and development. When the intent of the evaluation is to
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