INFORMATIONAL NEEDS
OF ORGANIZATIONS
UNDER CRISIS

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1. Introduction

The value of data base and management information systems (DBS and MIS) has been dramatically shown in the last few decades. It has been implied in a previous study\(^{(10)}\) that these systems provide trivial aid to the managers of organizations undergoing severe crisis. Simply put, it is argued that the current models, techniques, and principles of management are best suited for dealing with the “normal” problems of an organization, that is, with problems typically experienced during periods of organizational stability. During these periods the historical data and the information derived from them become the bases for formulating decisions, strategies, and even policies. Goals and objectives are well defined and broadly accepted. They become convenient points of reference for the organizational system in determining its need for corrective action. The DBS and MIS systems have served well in satisfying the informational needs of the stable organization.

The informational needs, however, of destabilized systems are totally different. In light of the unfamiliar conditions that prevail, a destabilized system no longer enjoys the benefits of well definedness and broad acceptability of its goals. The historical data contained in the DBS and MIS virtually become obsolete. This paper reveals the new type of information that will be needed by managers when steering systems through crises.

The type of information system needed could be described as “proactive.”
The initial entries would include a listing of the potential major crises that the system may be susceptible to. Unlike the traditional information systems a "proactive" one is forward looking rather than backward looking. Rather than merely derive information it seeks to create information. This paper presents a means by which managers are able to create new information through the generation of new "regimes."

2. Management of Crises

In a previous study we demonstrated the inevitability of crises in social systems.(9) When an organization is defended against a specific crisis, e.g., a labor strike, it is, ceteris paribus, made vulnerable to other crises, e.g., insolvency. It was proposed that a radical change in the treatment of crises needs to be made. Rather than being treated as events to be avoided or "designed away," crises must be treated both as opportunities for change and, more importantly, as strategic decision alternatives. In other words, a set of potential organizational crises is generated; each is then treated as a decision option and evaluated by means of a decision criterion.

The modeling procedure consists of the following steps: (1) preliminary listing of potential crises, (2) formation of a panel of experts or key representatives of interest groups, (3) construction of a crisis-triggered simulation model of the organizational system by a modeling expert with the aid of the panel, (4) setting by the panel of the threshold levels or critical values of vital organizational variables, e.g., market share, pollution level, and population density, (5) experimental simulation runs to study the behavior of the system under alternative crisis situations to provide pertinent information for the panel, (6) live-simulation and cost-benefit analysis of each crisis alternative by the panel, (7) generation of alternative "regimes" or new evolutionary patterns of the system with the panel's aid, (8) cost-benefit analysis of each "regime" by the modeling expert, (9) evaluation of each crisis-regime combination using a "net benefit" model by the modeling expert, and (10) selection by an executive in charge of preferred (or "optimal") crisis. The individuals involved in this procedure are an executive in charge of the project, a modeling expert, and a panel of key representatives of interest groups or at least of individuals playing their roles.

Legasto has already developed steps 1, 2, and 6–10 in Refs. 9 and 10. This study focuses on steps 3, 4, and 5. In particular, it will develop a crisis simulation model, demonstrate the way the critical values or "threshold levels" of vital system variables are set, and then produce test simulation runs via a computer to uncover more pertinent information about the system by artificially creating different crisis situations.

Throughout this continuing study a new approach to crisis management is