INTRODUCTION
INTEGRATING SCIENCE AND PRACTICE: THE EXPLOSION
OF KNOWLEDGE AND TECHNOLOGY IN I/O PSYCHOLOGY

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In the field of Industrial/Organizational Psychology, there has been an explosion in new knowledge and the ability to apply that knowledge during the past ten years. Where textbooks of the early to mid 1970's (Campbell, Dunnette, Lawler & Weick, 1970; Goldstein, 1974; Schneider, 1976) lamented our lack of progress, textbooks of the mid 1980's (Goldstein, 1986; Kopelman, 1986; Schneider & Schmitt, 1986) point proudly to the numerous advances made in our field. These advances are particularly significant, because the most notable ones have advanced science and practice simultaneously. New theoretical understanding relevant to human behavior at work has given rise to technologies which allow us to implement the new knowledge in practically useful ways. This special issue of the Journal of Business and Psychology samples from the most important practically significant developments in the field of Industrial/Organizational Psychology. While the issues and techniques presented are not the only "hot areas" in the field, they are representative of the changes taking place in the field as a whole. Each of the five authors or sets of authors was asked to discuss a specific new development with which he or she had been involved, as researcher or implementer. The authors were asked to review the current state of their respective fields of expertise, and encouraged to offer their own points of view. They were told to present their information in a relatively nontechnical way, so that human resource professionals and others in decision making positions, as well as psychologists, would find it accessible. All performed admirably, and I believe that the set of articles contained in this issue presents a wealth of currently useful information, as well as thought provoking opinions and perspectives that will stimulate future research.

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Adler argues that while the Assessment Center Method has been consistently shown to be one of the more useful selection devices in the I/O psychologist's repertoire, it does not necessarily operate in a maximally effective manner. He demonstrates that continued overattachment to its history has caused the Assessment Center to be more expensive and inefficient than needed, and suggests some methods for streamlining Centers without damaging (and perhaps even enhancing) validity.

London elucidates the point that the concepts involved in employee development are just as relevant to a contracting organization as to an expanding one. He discusses the modified meaning of employee development in a downsizing environment, and illustrates the potential contributions of the personnel psychologist in this area. An underlying theme of London's article is that employee development should be part of the organization's strategic planning.

Shiemann develops a model of the relationship between compensation and benefits policy and organizational productivity. After reviewing the research linking compensation and benefits policy to a variety of employee attitudes and behavior, he analyzes the likely impact of changing worker and organizational needs on future compensation and benefits policy design. Schiemann suggests that far reaching changes in the workforce and other aspects of the organization's environment will cause major restructuring of typical compensation and benefits programs.

Majchrzak and Klein examine the influence of changing technology on organizational structure, work design and employee attitudes and behavior. Their open systems model suggests that the key to understanding technological change is to attend to its effects on organizational processes (such as communications networks) rather than on organizational outcomes (such as productivity). These authors argue that the effects of office automation and the computerization of manufacturing technology are more similar than previously believed. They also outline the mediating role of organizational management in influencing the relationship between technological change and worker performance and satisfaction.

Finally, Rauschenberger and Schmidt demonstrate the increased ability of industrial/organizational psychologists to document their contributions to organizational productivity in terms that managers can understand. They show how estimates of the dollars and cents utility of human resources interventions (such as assessment centers, employee development programs, compensation programs, etc.) can be made. In addition, they provide substantial evidence that the actual value of these interventions is large, and, from a cost-benefit standpoint, compares favorably with other organizational programs.

I believe that the information presented in these articles is convincing evidence that I/O psychology is advancing by leaps and bounds, and