Chapter 9

Designing an Expert System

"Ring out the old, ring in the new."
Tennyson

INTRODUCTION

This chapter and case study address two important design problems. The first is the challenge presented by the task of developing systems that affect a major part of company activities—either by covering a widely dispersed function or a number of different functions. The second is the role of the group facilitator or project manager in relation to large systems design.

THE EIGHTIES

Strategies which work well at one time may not be successful at another. Both culture and the business climate can change. Many researchers saw the eighties as a disappointing time for organizational innovation. Industry came under pressure to cut costs and socio-technical approaches were increasingly seen as expensive and risky. Computer-assisted clerical and production systems were becoming very popular and an era of what has been described as “computer-aided neo-Taylorism” arrived (Moldaschl & Weber, 1998). The work of many clerks was routinised as computers moved into offices.
office world was now changing rapidly. Front-office computing and knowledge workers came with the advent of the personal computer in the 1980s. A large number of clerical white-collar tasks were now automated, and local area networks (LANs) facilitated internal company communication. Applications directed at the new knowledge workers, who were the modern successors of the old white-collar workers, tended to concentrate on personal productivity enhancement aids such as word processing, spreadsheets, desktop publishing and graphics presentation.

Unfortunately the International Quality of Working Life Council broke up at the beginning of the eighties. The original members did this with the best of intentions, believing that a new, younger group should take over and carry on developing the message. But they had paid little attention to nurturing their succession, and when they resigned, there was no younger group to take over. At the same time, interest from industry weakened as recession set in and labour shortages became a thing of the past. Both of these factors put a brake on future progress. The socio-technical initiative now became dispersed and centred on smaller groups in different countries. The Tavistock retained its influential role, projects in Scandinavia continued, Eric Trist was in the United States and Fred Emery in Australia, the American Socio-technical Round Table was created, and Federico Buttero set up a consultancy in Italy. But the international impact was now greatly reduced. No one was seriously pushing an integrated message internationally.

The other influential group, the companies which had supported and implemented socio-technical ideas and structures on their shop floors, was affected in different ways. The collapse of the Quality of Working Life Council meant that little proselytising was taking place, socio-technical systems now had a lower profile, and organizational change became, for senior managers, a question of assessing alternative risks. In the seventies, risk avoidance for many companies was obtaining enough skilled labour to run their production facilities and preventing expensive industrial disputes. In the eighties and nineties it became cutting costs to compete in increasingly challenging international markets and maintaining or raising the price of their shares. Reducing costs through reducing staff numbers was one way of doing this and socio-technical approaches to improve the quality of working life were seen as having little to offer (Mumford, 1996).

Although there were few socio-technical initiatives during this period, I and other researchers successfully carried out projects in North America and Europe to assist the introduction of new clerical computer systems. All of mine were participative. The future users played a major role in analysing organiza-
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