3

A Brief History of Organization Change

Organization change is as old as organizations themselves. The pharaohs of ancient Egypt probably struggled with a need to change the organizations that built their pyramids. And imagine the degree of organization needed, with continual modifications, to successfully construct the Great Wall of China. What we call reengineering today was probably practiced in some form back then.

The first organization change recorded in the Old Testament (Ex. 18:13–27) dealt with what we call today a *loosely coupled system.* In fact, it was too loosely coupled, and that was the problem. Moses was the client. Having escaped from the tyranny of the Egyptian pharaoh with thousands of Israelites as his followers, Moses had to deal with a daunting number of social system issues. Thousands of his followers had direct access to him. Moses was leader, counselor, judge, and minister to all. His father-in-law, Jethro, no doubt because he was concerned for his son-in-law's mental health, suggested what amounted to a reorganization. He proposed that Moses select a few good men to be rulers of thousands. They would have direct access to him and would bring to him only the problems they could not solve. Each of these rulers, in turn, would have lieutenants who would be rulers of hundreds and would have direct access to the rulers of thousands and would bring to them only the problems they could not handle, and so on, down to the lowest, the rulers of 10 persons. This was the birth of one of the first pyramidal organizations. It is possible, of course, that this idea of organization did not originate with Jethro; before Moses's deliverance, the Hebrews had been enslaved by the Egyptians, who had a highly organized society. In any case, changing organizations is not exactly new. What is comparatively new, however, is the *study* of organization change: what systematically seems to facilitate and enhance effective change (*effective* meaning the accomplishment of *planned* change goals) and what leads to failed attempts

at organization change. Note the emphasis on *planned* change. Organization change can be unplanned, of course, and more often is. This distinction will be covered in more detail later.

Jethro, along with his client, Moses, were early organization change agents. Since that earlier time, there have been many others we could cite, such as Machiavelli and his client, the prince. In keeping with the promise in the chapter title of being brief, however, a leap to the 20th century will now be made. Besides, our primary perspective and purpose is to consider the study of organization change, and it has been only recently that organization change has become an interest of scholars. What follows, then, is a tracing of the important forerunners of the modern study of organization change:

Scientific management

The Hawthorne studies

Industrial psychology

Survey feedback

Sensitivity training

Sociotechnical systems

Organization development (OD)

The managerial grid and OD

Coercion and confrontation

Management consulting

An appropriate starting point is the first decade of the 20th century and the work of Frederick Winslow Taylor, the father of scientific management.

Scientific Management

To understand and appreciate Frederick Taylor's approach to organization change, we need to consider the historical time and content of his work. The time was the late 1800s and early 1900s—his famous book, *Scientific Management,* was first published in 1911. Regarding the broader context, we need to recall that (1) the Industrial Revolution was in full swing, (2) the predominant type of organization experiencing considerable growth was manufacturing, and (3) the primary disciplines providing a strong foundation for (1) and (2) were economics and engineering. It is not surprising, then, that Taylor's conception of an organization was that of a *machine.* An organization, particularly a manufacturing one, should therefore be studied in scientific

terms: What is cause, and what is effect? And in terms of operating principles, the machine may be thought of as being based on the idea of a physical entity with movable and replaceable parts.

Taylor's (1980) "scientific management," as he labeled it, was based on four principles:

Data gathering: amassing "traditional" knowledge about the way work has been done in the past, through discussions with workers and observations of their work; recording the knowledge; tabulating it; and reducing it to rules, to laws, and, if possible, to mathematical formulas. In addition to talks with the workers themselves, Taylor used time-and-motion-study methods. These consequent rules, laws, and formulas were then applied to the workplace by management, and if applied properly, greater efficiencies were typically realized.

Worker selection and development: paying considerable attention to selecting and placing the worker in a job that was as good a match as possible of human skills and ability with the requirements of the job, in other words, the nature of the work itself. Furthermore, Taylor was a strong advocate of training and helping the worker do the best job he or she (mostly "he" during those times) was capable of performing.

Integration of the science and the trained worker: bringing together scientific management and the trained worker to "make" the worker and science come together. What Taylor meant was that one could have the best-trained workers humanly possible, but if they did not use and apply the new methods of work, the entire effort would fail. To "make" this integration, to use Taylor's word, he argued that workers needed to be treated well, taking into consideration their wishes and allowing them "to express their wants freely" (Taylor, 1980, p. 21). Moreover, he was a proponent of incentive pay. He added, however, that if a worker refused to perform the new modes of work, then moving that person out (to another job in the company or severing the worker from the company) was the proper step to take. Scientific management did not mean mollycoddling the workers, Taylor pointed out. He also stated that "nine-tenths of our trouble comes with men on the management side in making them do their new duties" (Taylor, 1980, p. 21). Obviously, Taylor believed that changing managers was far more difficult than changing workers. For scientific management to succeed, *management must assume new modes of work,* which is essentially Taylor's fourth principle.

Redivision of the work of the business: dividing the work of the company into two large parts. The job of the worker was to perform the work itself (shoveling coal, operating a machine, hauling pig iron, and so on), and the job of

management was to plan and monitor the work, *not* to actually *do* the work. Managers were to act like scientists, constantly collecting and analyzing data and then planning the next segment of the company's work accordingly. Managers were also responsible for providing the requisite resources for the workers to do their jobs. Taylor stressed the importance of cooperation between workers and managers for this division of labor to succeed.

Taylor demonstrated on a number of occasions that his approach worked; it reduced costs and improved profits. Yet not all was bliss. Frequently, Taylor's scientific management process did not succeed. Executives who used Taylor's methods were too often desirous of quick gains and either only partially or entirely inappropriately applied the methods. Workers resisted methods that appeared to them to be "speedups," used for no other apparent reason than to make more money faster, at their expense.

It is not surprising that Taylor became controversial. Some supported him strongly; others vilified him. There were, during Taylor's lifetime and still to some extent today, *two* Frederick Taylors (Weisbord, 1987):

> Few men ever were such powerful magnets for both admiration and revulsion. [There were] two Taylors. One a mechanistic engineer, dedicated to counting, rigid control, and the rationalization of work, an unfeeling authoritarian who turned his own neurosis into repressive methods anathema to working people. . . . The other was a humanitarian social reformer, who believed workers could produce more with less stress, achieve greater equity in their output, and cooperate with management for the good of society. This [latter] Taylor has hardly been recognized publicly since 1925. (pp. 25–26)

Taylor was probably the first industrial engineering consultant, and, as an organization change agent, he believed deeply that taking a rational, "scientific" approach would provide the best opportunity for change. He recognized that workers were "feeling animals," to use his words, and that they should be treated humanely. Data collected systematically, analyzed carefully, and applied rigorously, if not rigidly, would in the end be the primary set of methods that would achieve the greatest efficiencies and have the most powerful and lasting effect on the organization.

Taylor's impact on organizational work, especially those enterprises that rely predominantly on technology and engineering, should not be underestimated. Some would argue that he is not only the father of scientific management but also the father of the whole field of industrial engineering. Initiatives that today we call *reengineering* and *business process engineering,* for example, have evolved from Taylor. Other related activities of today include ISO 9000, six sigma, and total quality management. These days, it may not be politically correct to claim to be a devotee of Frederick Taylor, but to be involved in any of the techniques and methods just mentioned is to live in his long shadow.

The Hawthorne Studies

Whereas Taylor's work was steeped in the disciplines of economics and engi-neering, the Hawthorne studies, as they turned out, were significant contribu-tors to psychology and sociology. "As they turned out" is the operative phrase here, because the studies at the outset were not unlike Taylor's, for example, investigating the effects of lighting changes on worker productivity. In the early stages of their investigation, the research team was dumbfounded by the results. The assumed cause-effect linkage between illumination and productivity did not exist. Something else was clearly going on.

Beginning in 1924 and continuing into 1933, the Western Electric Company sponsored a series of experiments for studying worker productivity and morale at its Hawthorne Works, in Chicago. The researchers, from the Harvard Business School, were led by Fritz Roethlisberger, T. N. Whitehead, Elton Mayo, and George Homans and by W. J. Dickson of Western Electric. Full discussion of these studies is presented in Roethlisberger and Dickson (1939).

The studies can be categorized according to types of experiments, types of workers studied, and time period. The four categories of experiments, listed chronologically, were as follows:

The illumination experiments

The relay assembly group experiments

The interviewing program

The bank-wiring group studies

The intent of the investigators was to determine the effect of working con-ditions on productivity and morale. In the illumination experiments, lighting was changed in a variety of ways for a test group consisting of women. A con-trol group was also studied. As lighting was increased, productivity increased, but, to the surprise of the investigators, productivity continued to increase even when lighting was subsequently decreased to significantly less than it had been originally. Other variations were tried. In some cases, even when the researchers pretended to change the illumination, the women responded posi-tively and productivity increased. Throughout these experiments, regardless of whether the workers were in the test group or the control group, production either increased or did not change significantly. The researchers concluded that if light was a factor with respect to employee output, it was only one among many. They further hypothesized that worker attitude was a significant factor.

The next series of studies, the relay assembly group experiments, were conducted with a group of six women who assembled part of the standard telephone. The variables studied were shorter working periods, incentive pay,

personal health, and supervision. The conditions of the study were that (1) the women worked in a special, separate area, (2) they were continuously observed by a researcher, (3) they were consulted by the researcher-observer prior to any change, and (4) although the observer served as a supervisor of sorts, it was clear to the women workers that he was not a formal part of management. Over a period of 2½ years, in spite of many changes, productivity steadily increased to a level 30% higher than it had been before the experiments, and morale among the six women had improved steadily. Their absentee record was superior to that of the other regular workers, and there was no turnover. Also, regardless of the direction of the change the researchers made, output continued to increase over time. The conclusion was that there is no cause-and-effect relationship between working conditions and productivity. The women themselves told the researchers that the primary factors contributing to the increase in productivity were as follows:

More freedom on the job

No boss

Setting their own work pace

Smaller group (Their pay was based on their performance as a small group, as opposed to the usually larger one of 30 or more; thus, they had more control over the relationship between their performance and pay.)

The way they were treated

This series of experiments had clearly shown the researchers the importance of worker *attitude* and provided information about factors other than physical working conditions that contribute to positive worker attitude. Managers at Western Electric were impressed with these studies, particularly with what they perceived to be a considerable amount of latent energy and willing cooperation that could be tapped under the right conditions.

In an attempt to investigate attitude more thoroughly, a third set of studies was launched in 1928. This program began as a vast data-collection process using individual interviews. Some 21,000 interviews were conducted by 1930. The interviews tended to become counseling sessions, and the researchers learned a great deal about employee attitudes, particularly those relating to supervision, worker relationships, and the importance of perceived status. A major outcome of these interview studies was learning how to teach supervisors about handling employee complaints: teaching them that an employee's complaint frequently is a symptom of some underlying problem, one that exists either on the job, at home, or in the person's past.

The researchers' desire, however, was to investigate social relations on the job more extensively. Thus, the final set of studies was conducted with a bank-wiring group of 14 men. This group's job was to wire and solder banks of equipment for central connecting services. Again, the group was separated for

study, and data were collected by observers. The findings of this study concerned the importance of group norms and standards and the informal organization. For example, a group norm for rate of productivity significantly influenced the level of individual performance, and informal authority from influential group members often overrode formal authority from the supervisor.

The Hawthorne studies are significant as a precursor to our understanding of organization change for the following reasons:

They demonstrated the important influence of psychological or human factors on worker productivity and morale.

They signaled the criticality of certain variables for worker satisfaction: autonomy on the job (workers being able to set their own work pace), the relative lack of a need for close supervision of people who know their jobs, the importance of receiving feedback on the direct relationship between performance and reward, and having choices and some influence over change.

They ushered in more humanistic treatment of workers on the job.

They provided evidence for later theory, such as Herzberg's motivation-hygiene notion. The hygiene portion of Herzberg's theory is that there is no direct cause-effect relationship between working conditions and productivity (Herzberg, Mausner, & Snyderman, 1959).

They provided the stimulus and data for much of what we now know about group dynamics, especially in a work context. The bank-wiring group was analyzed thoroughly by Homans, and this study, plus others in the series, resulted in his theory about work groups, his leading-edge thinking about group norms, and his now classic book, *The Human Group.* (Homans, 1950)

A quotation from Roethlisberger (1980) is a fitting conclusion for this discussion:

What all their experiments had dramatically and conclusively demonstrated was the importance of employee attitudes and sentiments. It was clear that the responses of workers to what was happening about them were dependent on the significance these events had for them. In most work situations the meaning of a change is likely to be as important, if not more so, than the change itself. This was the great *éclaircissement,* the new illumination, that came from the research. It was an illumination quite different from what they had expected from the illumination. (p. 33)

Industrial Psychology

Industrial psychology is now called *industrial and organizational psychology,* and the expanded label reflects changes in the field. In earlier days prior to, during, and immediately after World War II, industrial psychology was largely limited

to business, industrial, and military organizations. Its primary thrust was testing, along with studies of morale and efficiency. Questionnaires for selection and screening were created by the hundreds and then tested for reliability and validity. As a result of the war effort, psychological testing came into its own. Industrial psychologists were also involved in training and development, especially supervisory and management training, during and after the war.

A research project conducted at the International Harvester Company by Edwin A. Fleishman (1953) during the late 1940s and early 1950s was typical of this era of industrial psychology. It combined supervisory training and the development of a psychological test. This series of studies, conducted over a period of more than 3 years, was highly significant for another reason, however; it provided useful background for our current understanding of organization change.

Fleishman (1953) was interested in the study of leadership and in the consequences of supervisory training: whether supervisors' attitudes and behavior would change as a result of a 2-week training program on leadership principles and techniques. Using several questionnaires, Fleishman took measures before the training and immediately after the program. Measures were also taken from a control group of supervisors and from the bosses and subordinates of both groups, the trained and untrained supervisors. In addition to measures taken right after the training, the same tests were administered at various intervals, ranging from 2 to 39 months later.

These tests reflected two primary functions of leadership: (1) *initiation of structure,* the provision of task direction and conditions for effective performance, and (2) *consideration,* the leader's sensitivity to and consideration of subordinates' needs and feelings. Prior testing had shown that first-line supervisors at International Harvester were strong in initiation of structure but were rarely considerate of their subordinates as people. The training program focused on increasing the consideration function.

Measures taken immediately after the training showed that the supervisors who had received the training scored significantly higher on consideration in comparison with both their own previous scores and the scores of the control group. Further measures taken over time with the trained group, however, revealed a startling outcome. These supervisors not only gradually reverted to their original behavior (not being very considerate) but, in a number of cases, they ended up being *less* considerate than the control group.

On further investigation, Fleishman (1953) found that the bosses of the trained supervisors also scored high on initiation of structure and low on consideration. The few supervisors who had considerate bosses continued to score high over time on consideration. There was a direct relationship between the attitudes and the behavior of the supervisors and those of their bosses. Moreover, this relationship was stronger than the effects of training.

Schein (1972) explains the outcome of Fleishman's research directly and succinctly,

> The effects of training were immediately related to the culture, or climate, of the department from which the men came. These climates had as much of an effect on the trainee as did the training. Consequently, the training was effective, in terms of its own goals, only in those departments in which the climate from the outset supported the training goals. (p. 44)

As early as 1953, therefore, the knowledge was available that organization change was not likely to occur as a result of an individual change strategy unless the objective of the training was in the same direction as the desired overall organization change.

One final point for this section: There have been many other contributions to our understanding of organization change from industrial psychologists during World War II and the decades that followed. The Fleishman study was singled out because it illustrated a critical point about organization change: the difference between focusing on the individual and focusing on contextual variables (such as group norms and organizational culture) and systemic factors (such as structure). These broader issues of organization change will be addressed in the next and later chapters.

Survey Feedback

As the previous section noted, psychologists rely rather extensively on questionnaires for data collection and for diagnosis and assessment. Leadership questionnaires typically have been associated with a group of psychologists at Ohio State University in the 1950s. Questionnaires for organizational diagnosis, however, are more likely to be associated with the psychologists of the 1950s and 1960s at the Institute for Social Research of the University of Michigan. Rensis Likert, the first director of the institute, started by founding the Survey Research Center in 1946. Kurt Lewin had founded the Research Center for Group Dynamics at the Massachusetts Institute of Technology (MIT). With his untimely death in 1947, the center moved to the University of Michigan later that year. These two centers initially constituted Likert's institute. The two main thrusts of these centers, questionnaire surveys for organization diagnosis and for group dynamics, combined to give birth to the *organizational survey feedback method.* As early as 1947, questionnaires were being used to systematically assess employee morale and attitudes in organizations.

One of the first of these studies, initiated and guided by Likert and conducted by Floyd Mann, was done with the Detroit Edison Company. From working on the problem of how best to use the survey data for organization

improvement, the method we now know as survey feedback evolved. Mann (1957) was important for the development of this method. He noted that when a manager was given the survey results, any resulting improvement depended on what the manager did with the information. If the manager discussed the survey results with subordinates, particularly through group discussion, positive change typically occurred. If the manager did not share the survey results with subordinates, however, and failed to plan certain changes for improvement jointly with them, nothing happened—except, perhaps, an increase in employee frustration over the ambiguity of having answered a questionnaire and never hearing anything further.

First, the survey feedback method involves the *survey,* data collection by questionnaire to determine employees' perceptions of a variety of factors, focusing mainly on the management of the organization. Second is the *feedback,* in which results of the survey are reported back systematically in summary form to all people who answered the questionnaire. *Systematically,* in this case, means that the feedback occurs in phases, starting with the top team of the organization and flowing downward according to the formal hierarchy and within functional units or teams. Mann (1957) referred to this flowing-downward process as the "interlocking chain of conferences." The chief executive officer, the division general manager, or the bureau chief—the highest officer in the organization or subunit surveyed—and his or her immediate group of subordinates receive and discuss feedback from the survey first. Next, the subordinates and their respective groups of immediate subordinates do the same, and so forth, downward, until all members of the organization who have been surveyed (1) hear a summary of the survey and then (2) participate in a discussion of the meaning of the data and the implications. Each functional unit of the organization receives general feedback on the overall organization and specific feedback on its particular group. After a discussion of the meaning of the survey results for their particular group, the boss and his or her subordinates then jointly plan action steps for improvement. Usually, a consultant meets with each of the groups to help with data analysis, group discussion, and plans for improvement.

Later, Rensis Likert (1967) took the survey feedback approach a step farther by developing his "Profile of Organizational Characteristics," a questionnaire and model consisting of six sections: leadership, motivation, communication, decisions, goals, and control. These six were surveyed within an overall framework of four organizational categories or systems. Likert labeled System 1 *autocratic,* System 2 *benevolent autocracy,* System 3 *consultative* (employees are consulted about matters, but management, in the end, makes the decisions), and System 4 *participative and consensus management.* Likert argued that System 4 was the most desirable and that most employees felt the same way. Likert thus was able to *profile* an organization according to the four system types along the six organizational dimensions mentioned above.

Thus, survey feedback, this rather orderly and systematic way of understanding an organization from the standpoint of employee perceptions and processing this understanding back into the organization so that change can occur, is a primary method of leveraging organization change. Unless applied appropriately, survey feedback will work no better than any other change mechanism. Used properly, however, survey feedback can be powerful for the following reasons:

- It is based on data.
- It involves organization members directly.
- It provides information about what to change and according to which priority.
- It focuses change on the larger system, not on individuals per se.
- In later chapters, the survey feedback method will be explored in more depth with reference to certain more current sources, such as Kraut (1996).

Sensitivity Training

From a historical viewpoint, it would be interesting to know how many events, inventions, or innovations that occurred in 1946 had lasting impact through the subsequent decades. Apparently, once the war was over, people were somehow free to pursue a variety of creative endeavors. One such innovative event occurred in the summer of 1946, in New Britain, Connecticut. Kurt Lewin, at the time a member of the faculty of MIT and director of the Research Center for Group Dynamics, was asked by the director of the Connecticut State Interracial Commission to conduct a training workshop that would help to improve community leadership in general and interracial relationships in particular. Lewin brought together a group of colleagues and students to serve as trainers (Leland Bradford, Ronald Lippitt, and Kenneth Benne) and researchers (Morton Deutsch, Murray Horwitz, Arnold Meier, and Melvin Seeman) for the workshop. The training consisted of lectures, role play, and general group discussion. In the evenings, most researchers and trainers met to evaluate the training to that point by discussing participant behavior as they had observed it during the day. A few of the participants who were far enough from their homes to stay in the dormitory rooms at the college in New Britain asked whether they could observe the evening staff discussions. The trainers and researchers were reluctant, but Lewin saw no reason to keep them away and thought that, as participants, they might learn even more.

The results were impactful and far-reaching. In the course of the staff's discussion of the behavior of one participant, who happened to be present and observing, the participant intervened and said that she disagreed with their interpretation of her behavior. She then described the event from her point of view. Lewin immediately recognized that this intrusion provided a richness to

the data collection and analysis that was otherwise unavailable. The next evening, many more participants stayed to observe the staff discussions. Observation alone did not last, of course, and three-way discussions occurred among the researchers, trainers, and participants. Gradually, the staff and participants discovered that the feedback the participants were receiving about their daytime behavior was teaching them as much as or more than the daytime activities were. The participants were becoming more sensitive to how they were being perceived by others and the impact their behavior was having on others. This serendipitous and innovative mode of learning, which had its beginning that summer in Connecticut, has become what Carl Rogers (1968) labeled "perhaps the most significant social invention of the century" (p. 265).

Sensitivity training, T-groups, and *laboratory training* are all labels for the same process, consisting of small group discussions in which the primary, almost exclusive source of information for learning is the behavior of the group members themselves. Participants receive feedback from one another on their behavior in the group, and this feedback becomes the learning source for personal insight and development. Participants also have an opportunity to learn more about group behavior and intergroup relationships.

T-groups (T is for training) are educational vehicles for change, in this case, individual change. When this form of education began to be applied in industrial settings for organization change during the late 1950s, the T-group became one of the earliest interventions in what became known as *organization development.* See, for example, the classic article "T-Groups for Organizational Effectiveness," by Chris Argyris (1964).

Sociotechnical Systems

As mentioned above, the period immediately after World War II was a productive time for innovation and creativity. While in the United States the serendipitous birth of the T-group was occurring, across the Atlantic, in the United Kingdom, a parallel and highly significant set of social developments was under way. The United Kingdom work emanated from the Tavistock Institute, based in London. There were two action research projects at the institute in the late 1940s. One studied group relations (like the T-group but different in the role of the group trainer, called a *consultant).* The other project studied the diffusion of innovative work practices and organizational arrangements. The former emphasized individual learning about oneself, group, and intergroup dynamics, and the latter emphasized organizational matters, especially organization change. Eric Trist was the leader of this latter project. He and his associates began their work at the time in the British coal industry.

The newly nationalized coal industry, then the major source of power in the United Kingdom, was not doing well. There were problems with productivity,

turnover, the union, and adaptation to new technology. One exception occurred in the South Yorkshire coalfield. Trist and his colleague, Ken Bamforth, a former miner himself, went to take a look. They found that the work organization consisted of the following (Trist, 1993):

> Relatively autonomous groups interchanging roles and shifts and regulating their affairs with a minimum of supervision. Cooperation between task groups was everywhere in evidence, personal commitment obvious, absenteeism low, accidents infrequent, productivity high. . . . The men told us that in order to adapt with best advantage to the technical conditions in the new seam, they had evolved a form of work organization based on practices common in the unmechanized days when small groups, who took responsibility for the entire cycle, had worked autonomously. These practices had disappeared as the pits became progressively more mechanized in relation to the introduction of "longwall" working. This method had enlarged the scale of operations and led to aggregates of men of considerable size having their jobs broken down into one-man/one-task roles, while coordination and control were externalized in supervision, which became coercive. Now they had found a way, at a higher level of mechanization, of recovering the group cohesion and self-regulation they had lost and of advancing their power to participate in decisions concerning their work arrangements. . . . It was not true that the only way of designing work organizations must conform to Tayloristic and bureaucratic principles. (pp. 37–38)

What Trist had discovered was a new paradigm of work and, what is interesting, the coal miners had designed it themselves. Trist went on to conceptualize and further develop the new paradigm, and it became known as *sociotechnical systems,* a new field of inquiry and approach to organization change. Some of the primary principles of sociotechnical systems are as follows (Trist, 1993):

> Work organizations consist of two *interdependent* systems: the technical system (equipment, machinery, chemical processes, etc.) and the social system (individual workers and groups of workers).

> The *work system* is the basic unit, comprising a set of activities that make up a functioning whole, rather than single jobs and tasks.

> The *work group,* rather than the individual jobholder, is central.

> *Regulation* of the system is performed by the group itself, instead of by supervisors (completely counter to Taylor's scientific management notions).

> An individual worker is *complementary* to the machine, rather than an extension of it.

There is more to the sociotechnical systems field than these principles; however, those presented are designed to provide a flavor of sociotechnical systems thinking.

Considering organization change through a sociotechnical lens means that one would gather data about both the social and technical systems but would then consider and act with the perspective that the two are *interdependent:* A change in one system will directly affect the other, and this effect must be treated as another leverage in the change process. For example, changing a piece of software in an organization's information system (the technical) will directly affect how employees who use the software interact with one another in the future.

A final point: Sociotechnical studies need to be conducted at three broad levels, from micro to macro, according to Trist (1993). All three levels are interrelated. The first is *primary work systems,* identifiable and bounded subsystems of a whole organization, such as a department or a business unit. The second is *whole organization systems,* the entire company or institution; they persist, as Trist points out, by maintaining a reasonably steady state within their environment. And the third is *macrosocial systems,* organizations within communities and industrial sectors, as well as institutions operating at a societal level, such as national government.

The sociotechnical approach insists that systems are interdependent. Moreover, this approach "has also developed in terms of open system theory [the subject of the next chapter] since it is concerned with the environment in which an organization must actively maintain a steady state" (Trist, 1993, p. 41). For more on sociotechnical thinking, especially on the design of effective organizations, see Pasmore (1988).

Organization Development

Both sensitivity training and sociotechnical systems set the stage for the emergence of organization development (OD). As the T-group method of learning and change began to proliferate in the 1950s, it gradually gravitated to organizational life. Sensitivity training began to be used as an intervention for organization change; in this application, the training was conducted inside a single organization, and members of the small T-groups were either organizational "cousins," from the same overall organization but not within the same vertical chain of the organization's hierarchy, or members of the same organizational team, so-called family groups.

As French and Bell (1995) have reported, one of the first events to improve organization effectiveness by sensitivity training took place with managers at some of the major refineries of Exxon (then known as Esso) in Louisiana and southeast Texas. Herbert Shepard, of the corporate employee relations department, and Harry Kolb, of the refineries division, used interviews followed by 3-day training laboratories for all managers in an attempt to move management

in a more participative direction. Outside trainers were used, many of them the major names of the National Training Laboratories at the time, such as Leland Bradford and Robert R. Blake. Paul Buchanan conducted similar activities while he was with the Naval Ordnance Test Station at China Lake, California. He later joined Shepard at Esso.

At about the same time, Douglas McGregor, of the Sloan School of Management at MIT, was conducting similar training sessions at Union Carbide. These events at Esso and Union Carbide represented the early characteristics of OD, which usually took the form of what we now call *team building* (Burck, 1965; McGregor, 1967).

Also during that period, the late 1950s, McGregor and Richard Beckhard were consulting with General Mills. They were working on what we now call a *sociotechnical systems change effort.* They helped to change some of the work structures at the various plants so that more teamwork and increased decision making took place on the shop floor; more "bottoms-up" management began to occur. They did not want to call what they were doing "bottoms-up," nor were they satisfied with "sociotechnical systems" or "organization improvement," so they eventually labeled their effort "organization development" (Beckhard, 1997). This label also became, apparently independently, the name for the work Shepard, Kolb, Blake, and others were doing at the Humble refineries of Esso.

The first sustained long-term OD efforts were conducted with TRW Systems, the aerospace division of TRW, Inc. (Davis, 1967), and with the Harwood-Weldon Manufacturing Corporation (Marrow, Bowers, & Seashore, 1967). During the early 1960s, Herbert Shepard, who had left Esso for the academic world at Case Western Reserve, consulted with TRW Systems and worked particularly with internal employee relations managers James Dunlap and Sheldon Davis. Team building was the primary intervention used in those early days. Later, as OD practitioners became more sophisticated and diversified, TRW Systems began to use a variety of methods. In fact, the external and internal consultants at TRW during the 1960s helped to invent much of the OD technology we use today—such as the organization mirror, "reflecting" back to members of a work unit how they see themselves in comparison with how others see them—and other quick techniques for team diagnosis (Fordyce & Weil, 1979).

The primary method at Harwood-Weldon started with an *action research approach* (Coch & French, 1948), conducting a study for the purpose of application and corrective action to some problem, rather than as research that serves the primary purpose of contributing to a body of literature and scholarship; it then gradually incorporated the method of survey feedback developed at the University of Michigan.

OD, then, is an approach to organization change based on applied behavioral science and reliant on the action research approach. It is steeped in the theoretical tradition of applied social psychology, especially the work of Kurt

Lewin. In other words, the methodological model for OD is action research: Data on the nature of certain problems are systematically collected (the research aspect), and then action is taken as a function of what the analyzed data indicate. The specific techniques used within this overall methodological model (few of which are unique to OD) are (1) diagnosis, interviews with both individuals and groups and perhaps the use of a questionnaire and observation, followed by analysis and organization of the data collected; (2) feedback, reporting back to those from whom the data were obtained on the collective sense of the organizational problems; (3) discussion of what these data mean and planning the steps that should be taken as a consequence; and (4) taking those steps. In OD language, taking a step is making an *intervention* into the routine way in which the organization operates. And finally, the field of OD is imbued with a strong humanistic value system, making certain that organization members are involved in the change decisions that will directly affect them and that interventions are frequently focused on change in the organization's culture. For coverage of this field, one may refer to the Addison-Wesley series on OD; the volume in that series that provides an overview is Burke (1994). Also, a more recent book series on OD and organization change is now provided by the publishers Jossey-Bass/Pfeiffer of Wiley.

The Managerial Grid and OD

What might be characterized as a special case of OD, a comparatively highly structured approach to change, both individual and organizational, is Blake and Mouton's managerial grid. First, a brief overview of their model relating to the individual manager will be presented, followed by coverage of their approach to change at the organizational level.

Building on the earlier work of Fleishman and his colleagues at Ohio State University in the 1950s (see earlier Industrial Psychology section), Blake and Mouton (1964) took the two dimensions of leadership—initiation of structure and consideration—relabeled them *production* and *people,* respectively, and specified that the typical leader or manager had different concerns about each, some being more concerned with getting the job done than about the people involved, and vice versa for others. They arranged these two concerns on a graph, using 9-point scales to represent the *degree* of concern (Burke, 1997):

The juxtaposition on a graph resulted in what they called the "managerial grid," a two-dimensional model that describes managerial style (Blake & Mouton, 1964). How these two concerns combine for a given manager determines his or her style of management. The greater the concern for production, the more autocratic the manager's style tends to be; the greater the concern with people, the more permissive the management style. Blake and Mouton argue that

a manager who has a simultaneously high concern for both production and people (what they label a "9,9 style") is likely to be the most effective (p. 5).

A few years later, Blake and Mouton (1968) applied the grid model to organization change, calling their approach "grid organization development." Based on a large, cross-sectional study, Blake and Mouton began with an organizational diagnosis that they claimed generalizes to most organizations. Their study showed that managers consider the most common barriers to organizational effectiveness to be (1) communication problems and (2) a lack of planning. Blake and Mouton contended that these two barriers were at the top of managers' lists, regardless of country, company, or characteristics of the managers reporting. They went on to argue that communication and planning as barriers to effectiveness were *symptoms* and not causes of less than optimal performance. Poor planning or the lack of planning stem from senior management's not having a strategy or having a faulty one. Communication problems come from poor supervision and management.

To address these two causes, Blake and Mouton (1968) developed a six-phase approach that addressed the organization's strategic plan and, of course, the style and approach to supervision and management.

The first phase in the grid OD approach was to train all managers in how to become a 9,9, or participative, manager. This usually required 5 days. Phase 2 was teamwork development, in a sense, applying what had occurred in Phase 1 with "cousin" groups to "family" units. In addition, group norms and working characteristics of the team were identified. Phase 3 was intergroup development, which characterized cooperative behavior, as opposed to competition between groups in the organization. Today, this process is often referred to as *cross-functional group work.* Phase 4 consisted of developing an ideal strategic corporate model. Phase 5 was the implementation of Phase 4, and Phase 6 was a systematic critique of the previous five phases, with a particular focus on specific barriers to change that still existed and needed to be overcome. In summary, Phases 1, 2, and 3 were designed to deal with communication problems, and the remaining phases were to address the planning barriers. In addition,

> Blake and Mouton never state it, but they apparently assume that, unless an organization learns how to communicate more effectively (practice 9,9 management) and plan more logically and systematically (build an ideal strategic model and begin to implement it), its management will never be able to deal optimally with the specifics of running a business. Phase 6 in the grid OD sequence [is designed to get to] the specifics. (Burke, 1994, p. 121)

Ten years later, Blake and Mouton (1978) claimed success for their approach, but outside their own reporting, there is scant documentation. This is not to argue that grid OD fails. Following Blake and Mouton's approach can lead to successful organization change. It is more a matter of senior

management's tolerance for a lock-step approach that is based on one best way to manage, participative, which goes against the grain of many organizational managers. On this final point, it should be noted that there is considerable evidence, despite the beliefs of many senior managers, that participative management is more likely than most other approaches to lead to higher unit and organization performance. See, for example, Chapter 5 in Druckman, Singer, and Van Cott (1997).

Coercion and Confrontation

Although coercion in the form of both nonviolent and violent strategies and techniques may not at first appear to be related to organization change, these kinds of social interventions have indeed been used. Disputes between labor and management have on occasion contained violent actions as well as nonviolent protests, such as company or plant entries being blocked by union members to prevent nonstriking employees from going to work. During the late 1960s, especially at the height of protests against the Vietnam War, attempts were made by students to change their universities. Their tactics were for the most part nonviolent yet highly intrusive, such as occupying the university president's office for several weeks.

Examining these coercive and confrontational strategies and techniques will not occupy a large space in this book (see Hornstein, Bunker, Burke, Gindes, & Lewicki, 1971, for more comprehensive coverage), but certain relevant points pertinent to our study of organization change should not be ignored. Two examples may help to make the point.

Groups, such as unions, minorities, and the disabled, who feel disenfranchised by the organization that employs them and confront or attempt to coerce management for changes may be understood to some degree by considering *in-group* and *out-group* theory and research. The pioneering experiments of Muzafer Sherif (Sherif, 1966; Sherif, Harvey, White, Hood, & Sherif, 1961; Sherif & Sherif, 1953; Sherif & Sherif, 1969) and the work of other scholars, such as Coser (1967) and Deutsch (1969), have helped not only to clarify and provide useful conceptualization in such situations but also to generate further ideas for dealing with such conflict. For example, the idea of a superordinate goal or common enemy is proposed to focus attention more on cooperation and less on competition and confrontation. Practical applications of such ideas for organization change may be found in publications such as Blake, Shepard, and Mouton (1964); Burke (1974); and Burke and Biggart (1997).

In the arena of community organizing and change, arguably the preeminent reflective practitioner was Saul Alinsky. His book *Reveille for Radicals* (Alinsky, 1946) became a handbook for how to organize and challenge accepted

authority. Many of his targets were organizations that he attempted to change through coercion and confrontation. The relevance of his work to the dominant view of organization change presented in this book is, as Peabody (1971) has pointed out, that Alinsky's model for building a community organization contains most of the same phases described by Lippitt, Watson, and Westley (1958) in their book on planned change. In other words, even though the underlying value systems and tactics differ, the overall framework for how to conceptualize the main phases of change is essentially the same. The phases of Alinsky's model were *entry, data collection, goal setting,* and *organizing,* which correspond closely to Lippitt and his colleagues' phases of planned change. To quote Peabody (1971), "The parallels are no coincidence; the study of power requires the keenest observation of social dynamics. Whether or not he read any of these behavioral scientists, Alinsky made similar observations years ago, and applied them to his own imaginative manner" (p. 524).

It can therefore be useful to understand more about change strategies and techniques that do not normally constitute chapters in books for students in psychology, sociology, organizational behavior, and management. Such learning can help either to undermine coercive techniques or to support, say, a disenfranchised group that one values.

Management Consulting

Jethro, of the Old Testament, may have been one of the earliest management consultants, if not the original one. One of the first management consultants of modern times was Frederick Taylor. From the standpoint of establishing a professional service firm devoted to management consulting, the first, at least in the United States, was James O. McKinsey. (According to Drucker, [1974] the first in the United Kingdom was Lyndall F. Urwick, born in 1891.) Born in 1889, McKinsey was younger than Taylor but knew of his work and was influenced by it, especially Taylor's strong emphasis on data collection and deep analysis. He started his consulting company around 1923 in Chicago. Unlike Taylor, McKinsey was not an engineer. He was educated in law and accounting (he was a CPA) and eventually became a professor in the Graduate School of Business at the University of Chicago. McKinsey was impressed with the rigor of Taylor's approach and stressed the importance of engineering principles for helping organizations improve and change. In fact, an early name of his firm, around 1938, was James O. McKinsey and Company, Accountants and Engineers.

Whereas Taylor stressed a scientific approach, McKinsey emphasized professionalism. McKinsey and Company was, and remains in emphasis to this day, a firm of professional practice, not a business per se. McKinsey

believed that three ingredients were critical to establishing a professional practice (Bower, 1979):

> Unquestioned respectability: McKinsey spent much of his early life getting himself educated and had a goal of becoming a professor of business.

> Professional exposure: He wrote books devoted particularly to accounting and budgeting and gave numerous speeches and lectures.

> Reputation: McKinsey wanted to make certain that he had a strong reputation for special competence in an area of concern to management, in his case, accounting, budget control, and business strategy and policy in general.

To say that McKinsey was successful is an understatement. The firm that bears his name today is considered to be one of the most prestigious of its kind.

The McKinsey way of consulting, as it is for most management consulting firms, is to employ a strict problem-solving process (Rasiel, 1999). First, the consultant gathers as much factual information about the client organization's problem as possible. For example, the client's presenting problem (the presenting problem may not be the real problem, as most experienced consultants know) may be a sudden drop in sales. Although this presenting problem is real, it is a symptom of something. Finding that "something" is the task. The consultant uses interviews, particularly with people from the sales force; company records that reflect, for example, sales and marketing strategies and tactics; survey data from customers; and accounting and financial information to collect as many facts as possible. Experienced management consultants believe that "facts are friendly" and that being fact-based is the same as being a credible, competent consultant.

Second, after a thorough analysis of the facts, an initial hypothesis is formulated, to be tested with the client. A third facet of this problem-solving process is to be highly structured. This means (1) limiting the recommendations for solving the problem to what can realistically be done with the client's resources, the consulting firm's resources, and amount of time required; (2) proposing a reasonable number of recommended actions (McKinsey, for example, often limits their recommendations to three, no more, no less; see Rasiel, 1999); and (3) establishing milestones that can be met with targets that can be achieved, along with the verbal assurance that the client will be satisfied.

The roots of management consulting, as mentioned above, come from Taylor. Thus, applying the scientific method of data gathering, analysis, hypothesis generation, testing the hypothesis, and action, basing remedies for the problem on these facts and the hypothesis, is the modus operandi. McKinsey and Company adopted Taylor's approach and added their own structured way of problem solving. Most management consulting firms conduct their business similarly. For more detail on the "McKinsey way," see the book by Rasiel (1999).

Today, management consulting is a huge industry and continues to grow around the globe. Moreover, major firms today include as part of their practice what has been referred to as *change management.* Even a major accounting firm such as Deloitte conduct a significant practice in change management, which they call "Organization and Strategic Change Services." Change management, then, is an attempt to integrate some of the standard aspects of management consulting (e.g., changing a client's business strategy, modifying its information technology systems, or changing the organizational design and structure) with organization change methods that are based on applied behavioral science, particularly organizational psychology.

Summary

Although the length of this chapter may not deliver the "brief" history of its title, the coverage provided is only the tip of the iceberg. A full chapter could easily be devoted to each of the 10 forerunners that were summarized. For the purpose of this book, the coverage provided should suffice. It is important to remember the following 10 points:

1. Scientific management set the stage for a systematic approach to organization change; prior to Taylor, such rigor had not existed.

2. The Hawthorne studies demonstrated the importance of the human dimension of organization change and contributed significantly to the future of applied behavioral science.

3. Industrial psychology, with the fuller integration of the individual and the organization, has provided, and continues to provide today, the research and theory required for the growth and development of our understanding of organization change.

4. Survey feedback may not be the most important tool for diagnosing and implementing organization change, but it is certainly in the top tray of our tool kit.

5. Even though controversial to this day and not used as prevalently as it was in the 1960s, sensitivity training has provided an unsurpassed mode for learning about group dynamics, interpersonal behavior, and oneself.

6. Sociotechnical systems furnished what seems today the obvious and yet overlooked critical nature of the interdependence of people and the organizational tools with which they work.

7. Organization development (OD) has given us a systematic approach to organization change with its emphasis on the total system, clear steps and phases of organization change, and an underlying set of humanistic values to guide the entire process.