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STUDYING AND CREATING CHANGE: A MEANS TO UNDERSTANDING SOCIAL ORGANIZATION

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Social organizations are functioning entities with interdependent structures and processes. They are not fixed, static structures, but rather continuously moving patterns of relationships in a much larger field of social activity. To understand what their essential elements and dimensions are, what it is that gives an organization its unity, it is necessary to study and create social change within organizational settings.

Relatively little is known about organizational change. Social scientists stress the study of the dynamic in social systems, but few[1] accept the risks involved to gain the knowledge and skills needed to create and measure changes in functioning organizations. This is not surprising for research within large-scale organizations is at such an early stage that the social scientist knows little about how (1) to gain access to these research sites, (2) to initiate and sustain organizational change, and (3) to measure such changes. We have only begun the systematic codification

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* Drs. Rensis Likert, Daniel Katz, Robert Kahn and Norman R.F. Maier have made especially helpful suggestions concerning the organization and presentation of this material. They can of course in no way be held responsible for the shortcomings which remain.

1 For an account of a conspicuous exception to this, see N. Morse and E. Reimer, "The Experimental Manipulation of a Major Organizational Variable," in the forthcoming issue of Journal of Abnormal and Social Psychology.

of the working knowledge and skills necessary for the researcher to get into, and maintain himself within, the social science laboratories of functioning organizations.[2] Systematic, quantitative measurement of change processes in complex organizational settings is in its infancy. Longitudinal studies are rare -- social scientists seldom attempt to obtain more than a single "before" and "after" measurement. The actual steps and skills necessary to initiate and sustain changes within an organization are not only relatively unknown, but there is even some suspicion that knowledge of social action and an ability to engineer change are not appropriate for the social scientists.

While social scientists are not spending any sizeable proportion of their time in learning how to change interpersonal and intergroup relations in functioning organizations, a wide variety of practitioners are. These include at the one extreme the consultants or the "operators" who take over organizations which are failing and rebuild them, and at the other extreme, the "human relations" trainers. Most of these men know very little theoretically about processes of organizational, attitudinal and behavioral change, but they do know a great deal intuitively about the problems of changing people in an organization. This is especially true of the training men.

This suggests that there should and can be a closer working relationship between those concerned with actually changing organizational structure and processes and those researchers concerned with understanding organizational change. Social scientists have not begun to take advantage of their opportunities for learning about organizations from those in the "practicing professions" --

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2 Mann, F. and Lippitt, R. (eds), "Social Relations Skills in Field Research," Journal of Social Issues, 1952, Vol. 8, # 3.

those who are doing.[3] Observations and systematic measurements around the practitioner's efforts to alter systems of relationships in organizations can provide the researcher with valuable insights into the dynamics of organization. Gaps in knowledge become excruciatingly apparent; new sources of data and problems for research emerge. In turn, social scientists can contribute to practitioners by helping them assess what effect their actions as change agents have. Most practitioners -- and especially those trainers who are concerned with changing the human relations skills of supervisors -- have very little systematic, and no quantitative, evidence on the success of their efforts to create changes in individuals or organizations. It seems clear that there is a broad basis for cooperation here. Systematic studies of the work of those attempting to change the way things are done in an organization may contribute to our understanding of social organizations. And developments in measurement and the procedures used by researchers to understand organizations better may contribute to the working knowledge of trainers and others in the "practicing professions."

In this chapter we will focus on the description and evaluation of several different types of procedures designed to change interpersonal and intergroup relations in complex organizations. We will first look at two human relations training programs whose effects have been systematically and quantitatively studied. Then we will describe briefly the development and evaluation of a change procedure with which we are experimenting to increase the understanding, acceptance, and utilization of survey research findings.

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3 Young, Donald, "Sociology and the Practicing Professions," American Sociological Review: 20: 641-648, December, 1955.

At the close of the chapter these two specific types of procedures for creating change in organizational settings are contrasted as a first step in identifying facets of change processes which merit greater experimentation and in providing insights into the structure and functioning of organizations.

CHANGING INTERPERSONAL RELATIONS THROUGH TRAINING SUPERVISORS

Recurrent opportunities for social scientists to study a change process within an organizational setting are provided by human relations training programs for supervisors. As change procedures, these programs are formal, rational, purposeful efforts to alter institutional behavior. In contrast to the day-to-day attempts of management to bring about change they are bounded in time and organizational space, and are thus easily studied intensively.

Because of the several historical developments described in chapters , , and , management by the late forties began to be convinced that training might be useful for their supervisors, and there has since been a wholesale adoption of human relations training programs. While there was and still is a remarkable range in the content, methods, and settings of these programs, nearly all of them have centered around improving supervisory skills in dealing with people - either as individuals or in face-to-face groups. They are frequently directed at teaching the supervisor how to work with an employee as an individual, occasionally at working with employees

as members of a small group, but only rarely at understanding and working within the complex social system of the large corporation or factory. Another way of saying this is that the courses have drawn heavily from psychology, to a lesser extent from social psychology, and usually not at all from sociology.

There are no commonly agreed-upon ways by which these programs can be described. The following headings are, however, useful: objectives, content, methods, setting, training leader, and training unit. For example, the objectives of these programs are usually very general and quite ambitious: "to assist supervisors in developing the skills, knowledge and attitudes needed to carry out their supervisory responsibilities," or "to improve morale, increase production, and reduce turnover." Their contents usually include human nature, personality, motivation, attitudes, leadership, and other information about relevant psychological principles and research findings. More often than not the methods of training are some variant of the "lecture-discussion method." The settings are frequently in a classroom away from the job. The trainers are generally staff men whom the trainee did not know before the training; the trainees, first-line supervisors or foremen meeting with other supervisors from other parts of the organization.

Few systematic, quantitative studies have been made to investigate the effectiveness of these programs.[4] This is not to say that there has been no interest in evaluation. Any review of the literature will indicate many such attempts and many testimonials about the relative advantages of different procedures of training. Mahler and Monroe[5] reported a number of

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4 A non-quantitative, but extraordinarily thorough and insightful study of the foreman training was made by Zaleznick, A., Foreman Training in a Growing Enterprise, Harvard Business School, Division of Research, Soldiers Field, Boston, 1951, pp. 232.

5 Mahler, W.R. and Monroe, W.H., How Industry Determines the Need for and Effectiveness of Training, Personnel Research Section Report 929, Department of the Army, 1952.

"evaluative studies" after reviewing the literature and conducting a survey of 150 companies known to have training programs. While these studies almost without fail acclaim the many benefits of such training, few of them meet more than a fraction of the requirements necessary for a rigorous test of the basic underlying assumptions.

What are these assumptions? In general, they are that training supervisors in human relations will result in changes in the supervisors' attitudes and philosophy, that these changes will be reflected in their behavior toward employees on the job, that this changed behavior will be seen by the employees, and that they will in turn become more satisfied with their work situation, then more highly motivated, and, ultimately, more productive workers.

While there is a good deal of evidence that human relations training programs do meet part of these assumptions -- e.g., they do appear to change the verbal veneer of supervisors -- there are few scientifically rigorous, quantitative studies which have demonstrated that these changes in what supervisors know affect their attitudes and behavior as seen or experienced by their subordinates. Few studies show that human relations training of supervisors is related to changes in the attitudes or productivity of employees under those supervisors.

It is not possible to make a complete review of these studies here. A review of the findings from several recent, major evaluative studies will, however, provide a good deal of evidence concerning the effectiveness of certain types of these training programs. The findings will certainly emphasize the need for more systematic, quantitative research to assess the most effective combinations of content, methods, settings, training units,

and trainers.

THE CANTER-TYLER STUDIES

In 1949, Canter[6] developed a human relations training course for first-line supervisors in the home offices of a large insurance company. The three objectives of the course were "(1) to establish facts and principles concerning psychological aspects of behavior and group functioning to enable supervisors to become more competent in their knowledge and understanding of human behavior; (2) to increase supervisors' capacities for observing human behavior; and (3) to present personality adjustment concepts to aid in integration of achievements made in the first two objectives." This training was designed to provide a foundation of information on which to build later through additional practice and "technique" training. Specific content was primarily psychological: human nature, personality, motivation, attitudes, leadership, and group structure. Method was lecture-discussion. The training occurred in the conference rooms of the company; Canter himself was the trainer. The trainees were 18 supervisors whose superior had participated in a preliminary run for executives. The course was presented in ten two-hour weekly sessions.

To determine the influence of this training, Canter employed a battery of paper-and-pencil questionnaires and tests which were given before and after training to two groups of supervisors: an experimental group of 18 from one department who received the training, and a control group of 18 from two other departments who did not receive training. The two groups were similar

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6 Canter, R.R., "A Human Relations Training Program," Journal of Applied Psychology, 35: 38-45, 1951.

in type of work performed, age (about 30), education (13 years), and proportion of men and women. While the control group had more years of service with the company (7.5 and 4.6, respectively) and higher mean scores on a mental alertness test, the statistical technique used in the final analysis did not require prematched individuals or groups.

Six tests, yielding a total of 12 separate scores, were used; (1) "How Supervise"; (2) General Psychological Facts and Principles; (3) General Logical Reasoning; (4) Social Judgment Test; (5) Supervisory Questionnaire; and (6) Test for Ability to Estimate Group Opinion. The major findings were that the trained supervisors obtained mean scores on all tests better than would have been predicted on the basis of the performance of the untrained group alone. For five out of the 12 measures, the differences were statistically significant at the 5 percent level; for two other measures, differences were significant at the 10 percent level. Other important conclusions were that trained supervisors became more similar in abilities measured by the tests, and more accurate in estimating the opinions of employees in their departments, but not their sections. It was also found that those holding highest scores initially gained the most on all measures except the Test of Ability to Estimate Group Opinion, where the opposite result was obtained.

While Canter assumed in his design that cognitive training -- i.e., an ability to understand human relations concepts and principles -- would have to precede any behavioral training in supervisory skills, practices, and attitudes, Tyler[7] designed a companion study to measure any changes in employee

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7 Tyler, B.B., A Study of Factors Contributing to Employee Morale, M.A. Thesis, Ohio State University, 1949.

morale which might be attributed to this training. Her morale surveys indicated improvement in employee morale scores for both the experimental and control departments. Morale improved by an average of 11 points per section (range = 2 - 25 points) in five of seven sections in the experimental group, and decreased slightly in two others. "In the control groups, morale increased in eight of the nine sections by an average of 14 points (range 5 - 32 points). The decrease in the other section was seven points. The only category which showed a somewhat consistent change among sections was 'supervision' on which scores for over half of the sections decreased." After warning the reader of the possible effect of the before-test experience, she notes: "Undoubtedly, the difference in change in morale between the control and the experimental groups is not large enough to be significant" (page 47). Canter, however, points out that in Tyler's study "morale was quite high initially ... which might account for the lack of any improvement in the experimental department over the control."

The strength of the Canter-Tyler studies is that they used both before and after measures for experimental and control groups. Canter's use of multiple criteria against which to evaluate the various sub-goals of the training program is also noteworthy. The use of Tyler's perceptual and employee morale measures in conjunction with Canter's attitudinal and cognitive measures permits an evaluation of the course's effectiveness at two levels: the supervisor's intent, and his on-the-job performance. The findings from this combination of studies make it obvious that classroom learning does not guarantee the translation of such learning into job performance. It should be remembered, however, that Canter did not set out to change supervisors' skills and practices, but only their understanding of human relations concepts and ideas.

FLEISHMAN-HARRIS STUDIES

Working with the education and training staff of a large company manufacturing trucks and farm machinery, Fleishman[8] developed a study design and a battery of research instruments for measuring the continuing effectiveness of leadership training. The general objectives of this training[9] were to change understanding, attitudes, habits, and skills of foremen by giving them a solid foundation in four basic areas of industrial knowledge. These areas were personal development, human relations, economics, and company operations. The method was primarily lecture-discussion. The training staff included full-time instructors, former supervisors, and part-time university faculty. The training was given to foremen who were taken from a wide variety of operations and plants and sent to a central school in Chicago for two weeks of eight-hours-a-day intensive development.

To determine the effects of this course on foremen from one motor-truck plant who had taken this training, Fleishman employed an ex post facto design with four groups of about 30 each. One group had not received the training; the other three had, 2-10, 11-19, and 20-29 months earlier. The groups were alike on a number of background characteristics: age (early forties), education (11 years), length of service (16 years), supervisory experience (7 years), size of work group (about 28), and supervisory experience with present work group (6 years). Seven paper-and-pencil questionnaires were used to obtain opinion, expectation, and perceptual data about leadership practices from the trainees, their superiors, and their subordinates. This battery gave Fleishman an opportunity to investigate the differences between

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8 Fleishman, Edwin A., "Leadership Climate, Human Relations Training, and Supervisory Behavior," Personnel Psychology, 6: 205-222, 1953.

9 Walker, Charles L., Jr., "Education and Training at International Harvester," Harvard Business Review, Vol. 27: 542-558, September, 1949.

supervisory beliefs as reported by the foreman himself, and supervisory practices as reported by his employees, and to explore the interaction of training effects with the supervisor's "leadership climate." Each questionnaire contained two independent leadership dimensions which had been identified by factor analysis: "consideration" -- the extent to which the supervisor was considerate of the feelings of employees; and "initiating structure" -- the extent to which the supervisor defined or facilitated group interactions toward goal attainment.

The results obtained by giving attitude questionnaires to foremen on the first and last days of their training in Chicago provide evidence of how the topics stressed in this leadership training affected these two dimensions. The results obtained from these before and after measures showed a significant increase in "consideration" (.05 level) and an even more marked decrease in "initiating structure" (.01 level). The on-the-job effects of the training, however, appeared to be "minimal." "The training did not produce any kind of permanent change in either the attitudes or behavior of the trained foremen." The employees under the most recently trained foremen actually saw them as less considerate than the employees under the untrained foremen saw their superiors. This statistically significant finding was supported by other trends towards more structuring and less consideration by those foremen who have had the training. Thus, while the human relations approach was stressed in the course and understood at least well enough to be registered as an opinion change on a paper-and-pencil questionnaire, it was not evident in what trained foremen said they did, or what their employees saw them doing in the actual work situation.

The most important variable found to affect leadership was the climate within which the foreman worked. In fact, the kind of superior under whom

the foreman operated seemed "more related to the attitudes and behavior of the foremen in the plant than did the fact that they had or had not received the leadership training."

These results, showing that the training was not meeting its objective of making foremen more human-relations oriented in the plant, left two alternatives open: redesign the course or initiate an intensive criterion study relating supervisory behavior to group effectiveness. The latter alternative was chosen, and Harris[10] designed a study in the same plant to investigate (1) the relationship between these two dimensions of leadership behavior and various measures of work efficiency, and (2) the effects of a training course planned as a brief refresher for the central school training in Chicago. It is the findings from this second objective in which we are primarily interested here.

The course, lasting one week, was given at a small nearby college. The effects were evaluated by field experimental design with before and after measures for experimental and control groups. Two groups of 31 foremen were established through matching on a number of variables, including length of time since attending the central school (almost 3 years), scores on before measures (including leadership climate), and other personal factors. One group was given the training. Questionnaires, similar to Fleishman's, were used to obtain information from employees and foreman about the foreman's attitudes and behavior.

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10 Harris, E.F., Measuring Industrial Leadership and Its Implications for Training Supervisors, Ph.D. Thesis, Ohio State University, 1952.

Harris used several different methods of analyzing his findings. His most rigorous method indicated there were no statistically significant differences in the foremen's own leadership attitudes or the worker's descriptions of their foremen's behavior -- before and after this additional refresher course. The only significant difference he found was a decrease in the degree to which the foremen in the control group showed structuring in their leadership behavior as described by their employees. Building on Fleishman's gradual decreases in structuring and increases in consideration the longer the foreman is back on the job, Harris suggests this finding might be interpreted to mean that the refresher course may have "tended to retard a general decrease in structuring."

Harris and Fleishman[11] in analyzing the data from both of their studies in the same plant have uncovered one finding which tends to qualify the general, completely negative conclusion of their findings regarding the effectiveness of this training. This finding concerns the stability of leadership patterns of individual foremen who did not have the training in contrast to those foremen who had the training. They find there is less stability in the pre-post measures for the foremen who have had the training than for those foremen who did not have training. This suggests that the courses had markedly different effects on different foremen, and that "large individual shifts in scores occur in both directions." They conclude that their research findings show no significant changes in group means among trained foremen and that future research should be directed toward investigating personal and situational variables which interact with the effects of training.

At best, these two studies suggest that this type of training has little or no general effect on the behavior of foremen in the plant. At worst, they

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11 Harris, E.F., and Fleishman, E.A., "Human Relations Training and the Stability of Leadership Patterns." Journal of Applied Psychology, 39: 20-25, 1955.

suggest that the unanticipated consequences of separating foremen from their work groups and making them keenly aware of their role in management more than offset the anticipated consequences of making the foremen more considerate of employees as human beings. Fleishman's finding that leadership climate appeared to be a better predictor than training of foremen's plant attitudes and behavior underscores the importance of considering the constellation of expectation patterns in which the trainee is embedded. Training, which does not take the trainee's regular social environment into account, will probably have little chance of modifying behavior. It may very well be that human relations training -- as a procedure for initiating social change -- is most successful when it is designed to remold the whole system of role relationships. of the supervisor.[12]

The findings from these four studies suggest that trainers, researchers, and others interested in social change need to rethink what forces are necessary to create and sustain changes in the orientation and behaviors of people in complex systems of relationships. There is a good deal of evidence that management and trainees are enthusiastic about these training courses in general. Management's enthusiasm may be an index of whether the training will continue, but it does not indicate whether training is achieving changes in behavior. And while trainee satisfaction and acceptance may be important as an antecedent to learning, these factors do not indicate whether the training will produce attitudinal and, more significantly, on-the-job behavioral changes.

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12 For a full account of these two studies combined, see Fleishman, E.A., Harris, E.F., and Buntt, H.E., Leadership and Supervision in Industry. Personnel Research Board, Ohio State University, Columbus, Ohio, 1955, pp 110.

It should be stressed that the criterion which has been used here for measuring the effects of human relations training is not easily met. There is ample quantitative evidence in the preceding studies that supervisors' information about, and verbal understanding of, human relations principles can be increased. There is much less evidence that these courses have an effect on the trainee's on-the-job behavior as seen by those working under him. And the hard fact remains that there are no quantitative studies which indicate that these courses in leadership affect workers' job satisfactions or motivations.

FEEDBACK: CHANGING PATTERNS OF RELATIONSHIPS BETWEEN SUPERIORS AND SUBORDINATES BY USING SURVEY FINDINGS

Long-range interest in the actual varying of significant variables in organizations has necessitated that members of the Human Relations Program of the Institute for Social Research not only study existing programs for training and changing people in organizations, but that we develop new techniques for changing relationships, and that we learn how to measure the effects of such changes within organizations. As a result, we have invested a good deal of professional effort in exploring the effectiveness of different procedures for changing attitudes, perceptions, and relationships among individuals in complex hierarchies without changing the personnel of the units. The latter is an important qualification, for we have found that the changes in subordinates' perceptions and attitudes which follow a change in supervisory personnel are frequently of a much larger order than those generated by training or other procedures for changing the attitudes or behavior of incumbents.

EXPLORATORY AND DEVELOPMENTAL PHASE

One procedure which we developed and subsequently found to be effective in changing perceptions and relationships within organizations has been called "feedback." This change process evolved over a period of years as we[13] tried to learn how to report findings from human relations research into organizations so that they would be understood and used in day-to-day operations. Work began on this process in 1948 following a company-wide study of employee and management attitudes and opinions. Over a period of two years, three different sets of data were fed back: (1) information on the attitudes and perceptions of 8,000 non-supervisory employees toward their work, promotion opportunities, supervision, fellow employees, etc.; (2) first-and second-line supervisor's feelings about the various aspects of their jobs and supervisory beliefs; and (3) information from intermediate and top levels of management about their supervisory philosophies, roles in policy formation, problems of organizational integration, etc. We had several aims in this exploratory phase: (1) to develop through first-hand experience an understanding of the problems of producing change; (2) to improve relationships, (3) to identify factors which affected the extent of the change, and (4) to develop working hypotheses for later, more directed research.

The process which finally appeared to maximize the acceptance and utilization of survey and research findings can be described structurally as an interlocking chain of conferences. It began with a report of the major findings of the survey to the president and his senior officers, and then progressed slowly down through the hierarchical levels along functional lines

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13 A number of people contributed to the design of this feedback process during its developmental phase. They included Sylvester Leahy, Blair Swartz, Robert Schwab, and John Sparling from the Detroit Edison Company, and Rensis Likert, Daniel Katz, Everett Riemer, Frances Fielder, and Theodore Hariton from the Survey Research Center.

to where supervisors and their employees were discussing the data. These meetings were structured in terms of organizational "families"[14] or units---each superior and his immediate subordinates considering the survey data together. The data presented to each group were those pertaining to their own group or for those sub-units forwhich members of the organizational unit were responsible.

Members of each group were asked to help interpret the data and then decide what further analyses of the data should be made to aid them in formulating plans for constructive administrative actions. They also planned the introduction of the findings to the next level. The meetings were typically led by the line officer responsible for the coordination of the sub-units at a particular level. Usually, a member of the Survey Research Center and the company's personnel staff assisted the line officer in preparing for these meetings, but attended the meetings only as resource people who could be called upon for information about the feasibility of additional analyses.

These meetings took place in the office of the line supervisor whose organizational unit was meeting, or in the department's own small conference room. All of the survey findings relative to each group were given to the leader and the members of his organizational unit; they decided what to consider first, how fast to work through each topic, and when they had gone as far as they could and needed to involve the next echelon in the process.

This feedback change procedure was developed in an organization where a great amount of effort had already been invested in the training of management and supervisors. During the war the company had participated in the

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14 Mann, F. and Dent, J., "The Supervisor: Member of Two Organizational Families," Harvard Business Review, 32: 103-112, No. 6, 1954.

various J-programs sponsored by the War Manpower Commission. And more importantly, during the several years we were experimentally developing the feedback process, Dr. Norman R. F. Maier was working with all levels of management to improve their understanding of human relations and supervision.[15] The supervisors with whom we were working to increase their understanding of their own organizational units had thus had a great deal of training in the application of psychological principles to management.

Our observations of the feedback procedure as it developed suggested that it was a powerful process for creating and supporting changes within an organization.[16] However, there was no quantitative proof of this, for our work up to this point had been exploratory and developmental.

A FIELD EXPERIMENT IN ACCOUNTING DEPARTMENTS

In 1950, when eight accounting departments in this same company asked for a second attitude and opinion survey of their 78 supervisors and 800 employees, we[17] had an opportunity to initiate the steps necessary to measure the effects of this organizational change process. The general plan for the handling of these new resurvey data was to let everyone in the departments -- employees and department heads -- see the over-all findings for eight accounting departments combined as soon as they were available, and then to workiintensively on their use in some departments, but not in others until there had been a third survey.

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15 For a thorough description of this training, see N.R.F.Maier, Principles of Human Relations. New York: John Wiley & Sons, 1952, pp 474.

16 Mann, F. and Likert, R., "The Need for Research on Communicating Research Results," Human Organization, Winter, 1952, 11:4, 9 pp.

17 Mann, F. and Baumgartel, H., Survey Feedback Experiment: An Evaluation of a Program for the Utilization of Survey Findings; Monograph in Preparation, Survey Research Center, University of Michigan.

While our objective was to test the effectiveness of the basic pattern of feedback developed during the preceding two years, we encouraged department heads and their supervisors to develop their own variations for reporting the data to their units and maximizing their use in the solution of problems. After the all-department meetings had been concluded, the chief executive of the accounting departments held a meeting with each department head in the experimental group. At this meeting, the findings for the department head's unit were thoroughly reviewed. The findings included comparisons of (1) changes in employee attitudes from 1948 to 1950, (2) attitudes in that department with those in all other departments combined, and (3) employees' perceptions of supervisory behavior with supervisory statements about their behavior. Department heads were encouraged to go ahead with feedback meetings as soon as they felt ready, tentative next steps were discussed, and assistance from the researchers and the company personnel staffs were assured. Four departments launched feedback activities which were similar to each other in purpose but somewhat different in method. The programs varied in duration (13-33 weeks), in intensity (9-65 meetings), and in the extent to which non-supervisory employees were involved in the process. During the 18 months that these differences were unfolding, nothing was done in two of the remaining four departments after the first all-departments meetings. This was done so they might be available as "controls". Changes in key personnel eliminated the remaining two departments from any experimental design.

A third survey of attitudes was conducted in these departments in 1952 after the natural variations in the feedback programs had run their courses. In 1950 and 1952 surveys were then used as "before" and "after" measurements; the four departmental programs as "experimental variations," with the two inactive departments as "controls."

Our findings indicate that more significant positive changes occurred in employee attitudes and perceptions in the four experimental departments than in the two control departments. This was based on two measures of change: (1) a comparison of answers to 61 identical questions which were asked in 1950 and 1952, and (2) a comparison of answers to 17 "perceived change" questions in which employees had an opportunity to indicate what types of changes had occurred since the 1950 survey. In the experimental group, a fourth of the 61 items showed relative mean positive changes, significant at the .05 level or better; the change for another 57 percent of the items was also positive in direction, but not statistically significant. Major positive changes occurred in the experimental groups in how employees felt about (1) the kind of work they do (job interest, importance, and level of responsibility); (2) their supervisor (his ability to handle people, give recognition, direct their work, and represent them in handling complaints); (3) their progress in the company; and (4) their groups's ability to get the job done. The 17 perceived-change items were designed specifically to measure changes in the areas where we expected the greatest shift in perceptions. Fifteen of these show that a significantly higher proportion of employees in the experimental than in the control departments felt that change had occurred. More employees in the experimental departments saw changes in (1) how well the supervisors in their department get along together; (2) how often their supervisors hold meetings; (3) how effective these meetings were; (4) how much their supervisor understands the way employees look and feel about things, etc. These indicate the extent to which the feedback's effectiveness lay in increasing understanding and communication as well as changing supervisory behavior.

Comparisons of the changes among the four experimental departments showed that the three departments which had feedback sessions with their employees, showed positive change relative to the control departments. The change which occurred in the fourth was directionally positive, but it was not significantly different from the control departments. In general, the greatest change occurred where the survey results were discussed in both the departmental organizational units and the first-line organizational units. The greater the involvement of all members of the organization through their organizational families -- the department heads, the first-line supervisors, and the employees -- the greater the change.

IMPLICATIONS OF THESE FINDINGS

The basic elements of this feedback process are not new. They involve (1) the orderly collection of information about the functioning of a system, and (2) the reporting of this information into the system for (3) its use in making further adjustments.

Work by Hall[18] and others who have had considerable practical experience with the use of information about a system for creating change show a similarity in both action steps and basic approach. This suggests there are certain psychological and sociological facts which must be taken into consideration in attempting to change the attitudes and behavior of an individual or a group of individuals in an organizational setting.

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18 Hall, Milton, "Supervising People - Closing the Gap Between What We Think and What We Do." Advanced Management, September, 1947, 129-135.

(1) Attitudes and behavior of an individual are functions of both basic personality and social role. Change processes need to be concerned with altering both the forces within an individual and the forces in the organizational situation surrounding the individual.

(2) Organizations, as systems of hierarchically ordered, interlocking roles with rights and privileges, reciprocal expectations, and shared frames of reference, contain tremendous forces for stability or change in the behavior of individuals or sub-groups. Change processes need to be designed to harness these forces for creating and supporting change. As forces already in existence, they must first be made pliable, then altered or shifted, and finally made stable again to support the change.

(3) Essentially, unilateral power and authority structures underlie the hierarchical ordering of organizational roles. Expectations of the superior are therefore more important forces for creating change in an individual than the expectations of his subordinates. Also, those with a direct authority relationship -- line superiors -- have more influence than those without direct authority -- staff trainers.

(4) The attitudes, beliefs, and values of an individual are more firmly grounded in the groups which have continuing psychological meaning to him than in those where he has only temporary membership. The supervisor's role of interlocking the activities of two organizational units requires that he have continuing membership in two

groups: (a) the organizational unit directed by his superior in which he is a subordinate along with his immediate peers; and (b) the organizational unit for which he is responsible. Change processes designed to work with individual supervisors off the job in temporarily created training groups contain less force for initiating and reinforcing change than those which work with an individual in situ.

(5) Information about the functioning of a system may introduce a need for change. This is especially true when the new data are seen as objective and at variance with common perceptions and expectations. Change processes organized around objective, new social facts about one's own organizational situation have more force for change than those organized around general principles about human behavior. The more meaningful and relevant the material, the greater the likelihood of change.

(6) Involvement and participation in the planning, collection, analysis, and interpretation of information initiate powerful forces for change. Own facts are better understood, more emotionally acceptable, and more likely to be utilized than those of some "outside expert." Participation in analysis and interpretation helps by-pass those resistances which arise from proceeding too rapidly or too slowly.

(7) Objective information on direction and magnitude of change -- knowledge of results -- facilitates further improvement. Change processes which furnish adequate knowledge on progress and specify

criteria against which to measure improvement are apt to be more successful in creating and maintaining change than those which do not.

COMPARISON OF "CLASS-ROOM" HUMAN RELATIONS TRAINING AND ORGANIZATIONAL FEEDBACK

This is only a partial listing of the points with which a scientifically based technology of social change in organizational settings will have to be concerned. Our conceptualization, identification of the relevant individual and organizational variables, and their interrelationship is at a primitive stage. The systematic quantitative investigation of the effectiveness of different change procedures has scarcely begun. Even at this early date, however, a comparison between the structure and process of feedback and "class-room" human relations training as two different types of change procedures may be a useful exercise. It may help identify variables or facets of change processes which merit greater experimentation and investigation both by the practitioners and by those researchers interested in organizational change. By a "class-room" human relations program we mean a training program which would consist of a series of class-room like meetings in which supervisors from many different points of the organization meet to listen to a presentation of psychological principles which a trainer from the personnel department thinks they ought to know about and be ready to use on the job after a brief discussion following the training. This kind of a training experience differs from the feedback process in a number of respects. These differences are stated to keep the comparisons reasonably brief and to sharpen the contrasts.

1. What are the objectives?

"Class-Room" Training --	To improve supervisor-subordinate relations through changing the supervisors' understanding of human behavior, attitudes and skills.
Organizational Feedback --	To improve organizational functioning through changing understanding, attitudes and behavior among all members of the organization.

2. What is the setting in which change is being attempted?

"Class-Room" Training --	Trainees are taken off the job and out of the network of interpersonal relationships in which they normally function for training in an "encapsulated"[19] class-room like situation.
Organizational Feedback --	Change is attempted as a regular part of the day's work in established organizational relationships.

3. What is the information content?

"Class-Room" Training --	General psychological principles of human behavior, case materials, or data from outside the training group and often the organization; only occassionally using problems from the group's own experience.
Organizational Feedback --	Objective quantitative information about attitudes, beliefs, and expectations of the trainees' themselves, or the subordinates in their own organization.

4. What is the method?

"Class-Room" Training --	Lectures, presentations, films, skits, and occasionally role-playing followed by discussion on how to apply what has been learned back on the job.
Organizational Feedback --	The progressive introduction of new information about the problems within the groups for which the trainees are responsible. Group discussions of the meaning and action implications of the findings, followed by group decisions on next steps for changing or handling the situation.

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19 Haire, M., "Some Problems of Industrial Training," Journal of Social Issues, 4: 41-47, No. 3, 1948.

5. Who are the trainees?

"Class-Room" Training --	First-line supervisors and foremen whose superiors may have had, but more often have not, had the course.
Organizational Feedback --	Everyone in the organization from the top down[20] -- the president, top management, intermediate and first-line supervision and employees.

6. What is the training unit?

"Class-Room" Training --	An aggregate or collection of individual supervisors from different departments throughout the organization. A conglomerate functionally without continuing psychological meaning for the individuals. Frequently seen as a "group" simply because the individuals are in close spatial proximity to one another.
Organizational Feedback --	An organizational unit whose members have an organizational function to perform and whose members (a superior and his immediate subordinates) have continuing psychological meaning perceptually and behaviorally to one another as a team or family.

7. Who is the change agent?

"Class-Room" Training --	An outsider -- an expert, a staff man -- who has no direct, continuing authority or power over the trainee and few recurrent opportunities to reinforce the training.
Organizational Feedback --	The organizational unit's line supervisor, who is given some help through pre- and post-meeting coaching by the expert outsider.

8. How is the pace or rate of change set?

"Class-Room" Training --	The trainer sets the pace, attempting to gear the training to average trainee's ability to comprehend and assimilate the material.
Organizational Feedback --	The members of the group move from one topic to another as they are ready for the next step.

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20 N.R.F.Maier, "A Human Relations Program For Supervision," Industrial and Labor Relations Review, 1948, 1, pp. 443-464.

9. How long does the change process continue?

"Class-Room" Training --	A fixed number of days or weeks, seldom less than 16 or more than 80 hours.
Organizational Feedback --	No fixed length of time, the change procedure usually continues over a period of months -- 6 to 24 months.

10. How much tension is there?

"Class-Room" Training --	Usually relatively little, most trainees feel they already know a good deal about human behavior and how others feel.
Organizational Feedback --	Frequently considerable, as objective information and particularly the differences between supervisory beliefs and practices come into a focus so sharp that complacency is shattered and the security about what is social reality is shaken.

11. What assumptions are made about attitudes and how they are changed? [21]

"Class-Room" Training --	The primary assumption is that the trainee does not know certain facts, that his previous organization of relevant information will be altered when he understands the new facts. Attitudes are seen as a function of the range of information available to the trainee; they are changed by altering cognitive structure.
Organizational Feedback --	Here the assumptions are that the trainee already has satisfying ways of seeing things and relating to others, that attitudes and behavior can be changed only by altering their motivational bases. Norms of psychologically relevant groups are seen as more important determinants of attitudes than cognitive processes.

12. How is effectiveness of the change measured?

"Class-Room" Training --	Usually by informal comments of trainees, occasionally by interviews or questionnaires with the trainees after the training.
Organizational --	By changes in employees' perception of their supervisor's behavior.

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21 Sarnoff, I. and Katz, D., "The Motivational Bases of Attitude Change," Journal of Abnormal and Social Psychology, Vol. 48, No. 1, January, 1954.

The differences drawn between these two types of procedures for creating change in an organizational setting may not be as marked as presented here. Human relations training programs do vary tremendously from company to company and from time to time. There is no single pattern. Since we know little about the frequency of different species of human relations training programs, the specific mix of content, method, setting, etc. which we used as the basis of our contrast may no longer be found in organizations. Our comparison aimed to emphasize the extent to which various characteristics of change processes vary on the basic dimension of motivation for change.

Different contents, different methods, different settings, different training units, and different change agents contain different motivational impacts for change. What constitutes the most effective combination for changing behavior in organizations is not known. Few practitioners have really done any bold experimenting; almost none have combined measurement and experimenting to search for the most significant dimensions and variables in change processes. This is an area in which there is a great need for social experimentation and social invention.

In the social sciences, as in the physical sciences, invention plays a crucial role. Inventions in social technology -- skills and processes for creating change -- and innovations in measurement both contribute speedily to progress in understanding social phenomena. The responsibility of experimenting with different methods of measuring change and with new procedures for investigating the interrelationship of functioning organizational processes rests heavily with the students of social organization. The rate at which knowledge about organization is developed will probably be closely correlated to the rate at which we try new approaches to the study of problems in this area.

RECENT DEVELOPMENTAL WORK IN MEASURING AND UNDERSTANDING CHANGE THROUGH TRAINING

The procedures used for measuring change today are quite limited. At the best, social scientists employ field experimental designs with before and after measures for experimental and control groups. While this allows a much more rigorous analysis than any variant of an ex post facto design, it is still basically only the linking of two or more static measures. This type of design can provide relatively little information about the dynamics of a change process -- especially one which takes a period of several months to run its course. This is a severe limitation when you consider the number of months over which some training programs are spread, or the rate at which changes occur in the interrelationship among various dimensions of authority, communication, and power within a large-scale organization.

Another methodological problem of great importance is to determine the appropriate criteria for measuring different types of changes. In measuring the effectiveness of human relations training, there is a wide range of criteria from which to select. These include: (1) the trainee's own report about his (1a) awareness and understanding of a human relations principle, his (1b) feeling about accepting and trying to use it, and his (1c) use of the principle in dealing with others; (2) the subordinate's (2a) perception of the supervisor's behavior relevant to the princip and his (2b) feeling about the appropriateness of such action on the part of a superior; and (3) changes in the objective measures of the efficiency of the organizational unit under the supervision of the trainee

The criteria used in evaluating human relations training programs has gradually been shifting from the trainee's own report on his enthusiasm, acceptance, and utilization of the training to the report of the others -- superiors, peers, and especially subordinates-- who are in daily contact with the supervisor after his return from the training. This assumes the use of any changes in the trainee's behavior will register in his associates' minds as a change, but this does not always happen -- associates may continue to see his behavior as they were accustomed to see it. We need to develop criteria for measuring changes in behavior which are independent of both the trainee's and his associates' accounts of the trainee's behavior.

USE OF SOUND FILM OF OWN PERFORMANCE FOR TRAINING AND MEASURING CHANGE

Working with 30 people in a two-week work conference on "Improving Staff Relations" at Columbia University Teachers College, Herrold and Mann[22] explored (1) some of the methodological problems of developing an intermediate criterion, and (2) related problems of integrating training and measurement. Sound motion pictures and recorders were used to obtain a record of the behavior of trainees at the beginning and at the end of the training period, as they worked in small groups to solve problems which a group of staff members typically might face. The films and the recordings of the trainees handling their first simulated staff problem were used by the trainers (1) for assessing individual participant's training needs, (2) for establishing the content and sequence of the training curriculum; and (3) as "live" own case material for training. Trainees knew from the outset that they would face a similar-type problem before cameras and recording machines at the end of the training to enable them to assess changes in their own behavior and skill in problem-solving. Participation in the collection, analysis and evaluation of data about their own behavior in a problem-solving situation appeared to create high ego-involvement and an intense desire to learn cognitively and behaviorally during the theory and skill practice sessions before taking the "after" measures. We have no quantitative evidence of the effectiveness of this combination training-research procedure, but is is clear that, with further development, sound motion pictures may be used for obtaining outside criterion measures of the changes in trainees' behavior. Trainees did not "freeze" before the camera or recorders, nor did they find the experience of having been brought face-to-face with themselves "brutal" as some trainers had predicted.

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22 Herrold, K. and Mann, F., "A Methodological Study of the Use of Sound Motion Pictures for the Development of Training Materials and the Self-Study of Trainees in a Brief Work Conference." Report in Preparation, The Center for Improving Group Procedures, Columbia Teachers College, New York.

NEW USES OF ROLE-PLAYING FOR TRAINING AND STUDYING THE FUNCTIONING OF ORGANIZATIONAL PROCESSES

Members of an organization seldom have an opportunity to experiment with the functioning of organizational processes; they are usually playing for keeps and have neither the time nor the intellectual and emotional objectivity to study the operation of intra- and inter-group processes in decision-making within their organization. Social scientists also have usually had to restrict their study of those processes to observation from the side lines. While they have watched business set up pilot plants to facilitate the development of new manufacturing processes, they have had to be content with the creation and investigation of the dynamics of small face-to-face groups in laboratory settings. With few exceptions, it has not been possible to obtain the financial support required for exploration and experimentation with simulated organizations. As a result, we know a good deal less about the dimensions of organization and their inter-relation than we do about the dynamics of small groups.

Recent developments in role-playing, and especially inter-group role-playing, appear to open new vistas for research and training on the internal operations of organizations. The value of role-playing for training and the study of inter-personal and intra-group process has long been recognized. It has been an effective methodological tool for those concerned with processes at the individual and small-group level. However, traditionally, role-playing has been restricted to interaction sequences which occurred among members within a small group in one setting and in a relatively brief time period. Typically, members of a group have been asked to assume certain roles and then solve a problem which seldom takes more than a half-hour. They may be asked to consider the effect their decision might have on other groups, but they would rarely be asked to follow through and coordinate their activities or decisions with other groups. These spatial,

temporal, and small single-group limitations have restricted the value of role-playing in investigating organizational variables and processes. Structurally, an organization is a large number of small groups interlocked by a system of supervisory roles. It is usually manned by many more people than ordinarily are involved in a sociodrama. Moreover, the wheels of an organization grind slowly. It may take days or months -- and certainly hours -- for intra-group decisions to be reached and then coordinated among groups within a complex organization. This complexity has precluded experimental role-playing with organizational phenomena until just recently.

Sequential Role-Playing

Human relations training has concentrated on developing trainees' understanding of individual psychology and the behavior of individuals within small problem-solving groups. Little or no time is given to providing trainees with any systematic understanding of the total system of relationships within which they must learn to work effectively. The few concepts of organization which might be introduced are usually seen as highly abstract -- something about which they do not need to be concerned as long as they remember to follow the lines on the company's organization chart. Trainees have little opportunity to learn about the relationship between formal and informal organization or the interrelationship between the authority, power, communication and sociometric structures within an organization. Moreover, trainers who are interested in helping people understand these phenomena on the behavioral as well as on the cognitive level, can find no laboratory exercises to ensure the students' first-hand acquantance with the materials being taught.[23]

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23 The use of laboratory exercises to ensure the trainees' learning includes thinking, feeling, and acting appropriately in relation to the demands of a situation is also a recent development of great importance. The interested reader will want to see two recent books by Norman R.F. Maier: Principles of Human Relations, John Wiley and Sons, 1952, and Psychology In Industry, Second Edition, Houghton Mifflin Co., 1955. For a useful compilation of eight skill-practice exercises, also see The Staff Report on Human Relations Skill-Practice Program, National Training Laboratory, 1952, mimeographed. National Education Association, Washington, D.C.

Mahoney and Mann[24] have found a form of role-playing -- "Sequential role-playing" -- useful in accelerating and deepening trainee's understanding of the interrelationship of authority and communication systems in hierarchical organizations. In a laboratory setting, trainees take different roles in the authority structures of different departments -- foremen, department heads, industrial engineering staff, and division manager -- and solve a problem developing in an assembly line.

The action starts when one foreman has to decide whom to talk to first about the problem developing in his section of the line. The problem concerns a rapidly increasing proportion of sub-quality parts coming from another section, the foreman of which is a personal friend of the first foreman, but who works under a different department head. If the foreman talks first with his friend, this sets off one chain of communication. If he discusses the problem with his boss, this activates another. If he elects to talk with a member of the industrial engineering staff, a third, and so on.

The exercise may take several hours, depending on the way the communication chains unfold. It provides concrete experiences with the relationship between formal and informal organization, and suggests under what conditions communication patterns can deviate from the authority system. Problems arising from selection, distortion, and omission of information during the communication process within a status system become visible. The extent to which the initiator of a communication sequence has little or no further control over how it is passed through the organization is often demonstrated dramatically.

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24 Mahoney, G. and Mann, F., "Sequential Role-Playing: A Technique for Developing an Understanding of Organizational Processes." Paper in preparation, Institute for Social Research, University of Michigan.

Organizational Role-Playing

During the past few years a much more elaborate type of role-playing procedure, designed to sensitize participants to the structure and dynamics of a whole community or formal organization, has been developed and tested in a variety of forms. It represents an attempt to make manifest the dimensions of social organization and their interrelationships suggested by Warner,[25] Hollingshead,[26] Hunter,[27] Jensen,[28] and others by constructing a mock community or organization complete with key roles, groups, and relationships, and having the trainees live and work in these roles over an extended period of time, usually several days.

Several such training designs for portraying the forces at work within a community were used at the National Training Laboratory at Bethel and in other regional laboratories in 1954.[29] A training design for a school system was tried at Bethel the following year. This type of "organizational role-playing" was subsequently adapted to the hierarchical organizational setting of a hospital,[30] and tested in a four-day training conference with hospital administrators.[31]

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25 Warner, W.L. and Lunt, P.S., The Social Life of a Modern Community, New Haven: Yale University Press, 1941.

26 Hollingshead, A.B, Elmtown's Youth, New York: John Wiley and Sons, 1949.

27 Hunter, F., Community Power Structure: A Study of Decision-Makers.

28 Jensen, G.E., "The Social Structure of Communities," Educational Research Bulletin, 34: 29-40, 1955.

29 Jensen, G.E., Gibson, W., Wilenski, H., et al: A Training Design in Community Human Relations. Washington, D.C., National Training Laboratories, 1954.

30 Jackson, J.M., Jensen, G.E., and Goodson, M., "A Training Design for Hospital Administrators," Article in preparation.

31 Jackson, J.M., Jensen, G.E., Mann, F.C., "Research and Training on the Functioning of Organizational Processes." Article in Preparation.

A short description of what occurred is presented to suggest the value of this new form of role-play for portraying and investigating the interplay of organizational processes.

The objectives of the "community hospital" training design were to sensitize participants to differences between effective and ineffective problem-solving within groups, to problems of inter-group problem-solving and multiple role pressures within an organization, and to the image of an organization as a multiplicity of interdependent groups interlocked through a system of superior-subordinate roles. "The hospital" was set up in a large convention hall in a Chicago hotel. It was run by 90 administrators from all types and denominations of hospitals after they had first been introduced to role-playing and then helped to build and internalize the individual images and role prescriptions needed to operate this hospital. Each participant had a role in one of the 14 sub-groups: board of trustees, administration, medical staff, nursing service, business office, office, plant, pharmacy, etc. When each person had established his individual, sub-group, and organizational identity, and had learned how to work and communicate with others in the simulated organization, the hospital was given a problem to solve. At a board meeting it was revealed that the hospital's rating by the Joint Accreditation Commission had dropped from "full" to "provisional approval" and that it was operating with a financial deficit. The board members, the administrator, department heads, and the hospital as a whole worked on solutions to meet these problems for two days. Briefly, this is what happened during those two days:

The disclosure in a meeting of the Board of Trustees that the hospital was not up to professional standards and was operating at a loss put tremendous pressure on the administrator to get the hospital in

order in terms of the two standards by which a hospital is evaluated: service and profit. The board members -- business men -- who were accustomed to assessing the adequacy of an organization from a profit and loss standpoint were displeased to hear of the financial status of the organization, but were shocked to find it was not meeting medical standards. The members felt their reputations within the community were at stake, and that the administrator should take immediate steps to meet this double threat to the continued existence of the hospital. They offered their services to help in any way they could.

At the outset the administrator chose to talk with each department head individually rather than convene all the senior members of his staff for a meeting on how to handle the problem. While he was attempting to brief department heads individually and indicate what help he wanted, members of departments who had no assignment other than to do their regular tasks began to speculate as to how their energies could be brought to bear on the problems about which they had heard indirectly. Members of the medical staff solved this by letting a newspaper reporter know that there was a story at the hospital and suggesting that the outsiders try to get an interview with the president of the board about the hospital's loss of full accreditation. When the board members learned there had been a news leak, they interrupted the administrator's sequence of individual meetings with department heads to call him on the carpet for not having full control of communication channels between his hospital and the community at large. Their confidence in him further shaken by this unofficial leak, they then decided to inspect the hospital, visit with each department, and learn for themselves about the specific problems of the organization. The administrator asked his assistant to accompany them. Meanwhile, as these events occurred at the front offices of the organization, and no official

information about the hospital's problems was given through formal channels of communication, rumors about problems in various departments began to circulate. As the rumors snowballed and the board members began meandering through the organization to see about conditions for themselves, the administrator's authority and control of the organization began to wane. It continued to drop until the trainers asked for a temporary cessation of the hospital activities at the end of the first afternoon.

There was a marked difference in the types of problems being worked on in various sections of the hospital during the first day. The departments whose heads had been briefed on the problem were preparing recommendations on how they and other departments might cooperate in alleviating problems. Others were still doing their routine tasks: checking heat problems in the boiler room, asking other units to cooperate in getting nurses to classes on time, and so forth. The energies of some departments had been organized to meet the major problems faced by the hospital, in other departments they had not. The problem of maintaining authority and order within different units varied directly with the meaningfulness of the tasks their groups were working on. The "inspection tour" of the board members placed them in a position to be approached directly with recommendations for extra personnel and equipment. This further stripped the administrator of his authority and broke down the regular system within the organization for handling routine requests. The tour was not even functional for some of the board members as they confessed they found "everybody wants everything, and there was not enough money for anything".

The first act of the administrator on the second day was to call all of his department heads together, brief them on the problems, and ask them for recommendations and new operating budgets as soon as possible. He then concentrated on handling a number of personnel problems which had developed within his own office. While he was working on these intramural problems, the chief of the medical staff and several doctors were meeting directly with three board members to see if some type of arrangement could be worked out between these two power groups, which would reduce the administrator's job, and make him responsible only for the physical plant and the auxiliary services. The proposal that the trustees and the medical staff work together directly on the financial and professional well-being of the hospital was made in several forms and at several times during a long meeting. One of the forms it took was that the trustees and doctors release a joint statement (without the administrator) that they had reviewed all aspects of the hospital operation, found it wanting in a few minor places, but had taken the steps necessary to re-establish the reputation of the hospital financially and medically. It appeared that this invitation to create a public scapegoat had succeeded for a time. However, when the trustees who attended the meeting reported the suggestions of the medical staff to the president and all the other members of the board, they were assured that this approach was totally foreign to the intentions of the board as a whole. The board then let the administrator know they were behind him. After they had done this, the authority of the administrator began to become evident again. The same forces which had worked against the administrator on the previous day seemed to change their direction and begin functioning to rebuild and support his position in the authority structure of the organization.

Discussions with a small group of the administrators who had become most involved in this training indicated that they felt they had acquired a greater understanding of the following kinds of organizational phenomena:

(1) The interrelationship of the authority, power and communication within hospitals.

(2) The functional and dysfunctional aspects of informal communications systems.

(3) The pivotal character of the role of supervisors as members of two organizational units -- a superior and a subordinate group.

(4) The distinction between a management philosophy of superior-to-subordinate (man-to-man) relationships and one of superior-to-subordinates-as-a-group (organizational team) relationship.

(5) Some of the essential differences between effective and ineffective intra- and inter-group problem-solving procedures.

(6) The marked isolation of some sub-groups from the decision and policy-making centers of the organization.

It was generally agreed that much of what they had learned was not different in kind, but in degree, from what they had known before taking part in "the hospital". They felt that the telescoping of a great deal of organizational problem-solving into a short period of time gave them greater insight into the dynamic interrelationships among different organizational processes.

This training design and experience has been spelled out in some detail because it appears to be an extension and an innovation in role-playing

which holds promise for both human relations training and research into organizational processes. The value of attempting to use role-playing of this magnitude to learn more about interplay of organizational processes may be questioned. However, our first experience in establishing a functioning hospital with administrators as role-players who have a large fund of "organizational know-how" to use as the basis of their actions, suggests that this is a form which should be experimented with and perhaps developed both by researchers and trainers interested in understanding the interrelationship among power, authority, and communication processes within an organization.

SUMMARY

The objective of this chapter has been to indicate how developments and innovations in human relations training and its evaluation may contribute to our understanding of processes and determinants of social change in large-scale organizations, and in turn to our understanding of organization. We found from a review of the quantitative studies evaluating the effectiveness of human relations training for supervisors that there is relatively little evidence that these programs change the attitudes or actual behaviors of people embedded in these complex systems of relationships. If it were not for the relatively positive findings from the feedback experiment in which survey findings were used to change interpersonal perceptions and attitudes, we would be in doubt as to whether such training programs have less effect than we generally anticipate or whether our ability to measure changes by linking static measures was deficient. The contrast between the ordinary pattern for human relations training and the feedback procedure for creating change has focused our attention on a number of distinguishing

characteristics which may be helpful in identifying factors that facilitate or impede organizational change.

In the latter part of the chapter, we have described some recent developmental work now underway in measuring and understanding organization through change and training. This involved the use of sound films of own performance for training and simultaneously measuring change, and new uses of role-playing for training and studying the functioning of organizational processes. Organizational role-playing was spelled out in some detail, for it is a new development in the use of role-playing which opens the way for experimenting and studying the interrelationship of various organizational dimensions which have long seemed to be out of the experimental reach of social scientists.