To the Graduate Council:

I am submitting herewith a thesis written by David Walter Thomas, Jr., entitled "An Evaluation of an Organizational Development Program." I recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Industrial Management.

John M. Larsen, Jr., Major Professor

We have read this thesis and recommend its acceptance:

Accepted for the Council:

Vice Chancellor
Graduate Studies and Research

AN EVALUATION OF AN ORGANIZATIONAL DEVELOPMENT PROGRAM

A Thesis

Presented for the

Master of Science

Degree

The University of Tennessee

David Walter Thomas, Jr.

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ABSTRACT

The purpose of this study was to evaluate the results after one year of an industrial company's introduction of an organizational development program. The data reported included productivity, efficiency, waste, quality and opinions of style of management being practiced.

The data used in the study were examined and adjusted in an attempt to obtain a test tube type evaluation. While the data is confidential and absolute numbers are not given, trends can be shown. Where possible, changes and external forces impacting the data are identified.

The study showed a beginning decline in production factors followed by improvement. Management style showed a reported change while absenteeism and product quality improved.

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CHAPTER I

INTRODUCTION

I. GENERAL INTRODUCTION

In order for an industrial company in the free enterprise system to exist, it must constantly develop its capabilities to compete effectively and efficiently. To do this, the company must modify and change its managerial approach based on external and internal influences. One result of combined external and internal factors impacting the North American Company is the alienation of the worker.

Many recent studies have pointed out this problem. One study conducted by the Upjohn Institute for Employment Research for the Department of Health Education and Welfare is entitled "Work in America." Faced with similar input over the past ten years from studies like the Upjohn study, some companies have elected to start an organizational program focusing on organizational behavior. Prior to this approach, most of these companies had moved through normative based scientific management and structured organization to the organizational behavior approach.

In the early 1900's there emerged a managerial approach which could be referred to as scientific management. Much of the work in this area can be credited to Frederick W. Taylor and Frank B. Gilbreth. This approach took the form of measuring the ways individual jobs were

performed and through analysis to develop and implement more efficient ways of doing these jobs. It placed emphasis on cost system, methods, techniques, and control. Under this system, management held a normative assumption that people should act in a certain and specified way.

Following scientific management and utilizing many of its techniques, the structured organization came into prominence some twenty to forty years later. Impacting this era were Fayol, Barnard, and Urwick. Under the structured organizational approach, management was concerned with the effective ways of grouping clusters of jobs under the overall direction of departments to obtain set organizational objectives. It was a highly rational approach for organizing and placed special emphasis on structure, objectives, functions, sources of decision making and authority, chains of command, and spans of control.

However, despite the intensity of a scientific analysis and rational organization, the people making up those organizations sometimes acted in strange and unpredictable ways. In the 60's and 70's, an increasing number of studies by the behavioral scientists led to the management approach of organization development along behavioral science lines.

> In the behavioral science, and perhaps ideal, sense of the term, organization development is a long-range effort to improve an organization's problem-solving and renewal processes, particularly through a more effective and collaborative management of organization culture--with special emphasis on the culture of formal work teams--with the assistance of a change agent, or catalyst, and the use of the theory and technology of applied behavioral science, including action research (French, 1973, p. 15).

Organizational development focuses on how people do work and behave in a work environment. Its concepts and methods are based on psychology, sociology, and anthropology. It considers and utilizes the impact of the organization on the people making up an organization.

Some of the most notable early influences on organizational development were Maslow, McGregor, Herzberg, and Likert.

Abraham Maslow theorized that man is a never satisfied animal (Maslow, 1965, pp. 261-265) with needs organized in levels of importance. Each of these needs must be fulfilled before the individual is concerned about the next higher need and a satisfied need is no longer a motivator of the individual's behavior. He grouped these needs from bottom to top as physiological, safety, social, ego, and self actualization needs. Maslow's theory of motivation suggests that human effectiveness is a function of matching man's opportunities with the appropriate position of this hierarchy of needs and thereby enabling him to progress upward.

Douglas McGregor identified a lack of attention by industrial companies to the top level needs of the individual. He suggested two theories of identifying ways of managing people and called them Theory X and Theory Y.

According to McGregor, Theory X (McGregor, 1960, pp. 33-43) managers believe that people are lazy, will avoid work if at all possible, avoid responsibilities, have little ambition, work best if ordered by fright or threat, and want security above all else. Theory Y (McGregor, 1960, pp. 45-57) managers feel the average worker prefers

to work, accepts responsibility, needs to know the rewards for achieving objectives, if committed to objectives will direct and control himself, and has imagination and desires creative challenge.

McGregor suggested that Theory Y, through its integration of the individual members of an organization with organizational goals, would yield increased success of the enterprise (McGregor, 1960, pp. 49-53). He did not suggest the total removal of the direction and control associated with the exercise of authority of a Theory X organization (McGregor, 1960, pp. 124-131). However, he did suggest that managers should look to the social and behavioral sciences and apply some of the knowledge gained through research done on human behavior.

Herzberg theorized that job satisfaction is separate and distinct from job dissatisfaction (Herzberg, 1964, pp. 107-112), at least in the elements which lead to each. The opposite of job satisfaction is not job dissatisfaction, but rather no satisfaction at all. The opposite of job dissatisfaction is not satisfaction, but rather no dissatisfaction.

Herzberg divided needs or job factors into two groups (Herzberg, 1964, pp. 113-119); hygienic and motivational. He stated a lack of hygiene factors result in job dissatisfaction. Hygiene factors are company policies, administration, supervision, interpersonal relationships or conditions, salary, status and security. Motivational factors relate to job satisfaction and serve the growth need of the individual through achievement, recognition, the work itself, responsibility,

growth and advancement. Herzberg placed emphasis on the view from the worker's side instead of from management's. He concluded that an organization satisfying the hygiene or maintenance factors and focusing on utilizing the motivational factors could attain greater success (Herzberg, 1964, pp. 138-139.

The studies by Rensis Likert led him to conclude that more favorable gains in productivity were possible through the behavioral science approach rather than previous management styles (Likert, 1961, pp. 77-88). Likert suggested that traditional accounting does not measure the total impact of management programs on the organization. It fails to give proper emphasis to know-how and skills (Likert, 1961, pp. 75-76), while giving major emphasis to the short term at the expense of long term earnings.

Likert recommended a managerial approach utilizing modern principles and techniques of motivation, dealing with people in ways that maintain and enhance feelings of self worth, building an organization of tightly knit and highly motivated work groups committed to achieving organizational objectives, and holding high performance goals and expecting that they be met (Likert, 1961, pp. 237-248).

The history of organization development includes names such as Argyris, Beckhard, Benne, Bennis, Blake, Bradford, Chin, Davis, Ferguson, Lewin, Likert, Lippitt, Mann, McGregor, Mouton, Schein, Shepard, Tannebaum, and Walton.

French and Bell trace the history through two recent and concurrent stems of importance (French, 1973, pp. 21-29).

One stem is the laboratory training stem having its beginning in small unstructed group discussions in 1946. The purpose was to learn through interaction and group dynamics how to effect behavior changes back home. Workshops sponsored by the Connecticut Interracial Commission, Research Center for Group Dynamics, and the National Education Association in 1946 and 1947 were to lead to the National Training Laboratories for Group Development and T-Group Training.

The problems of transferring laboratory behavioral skills and individual insights into organization problem solving resulted in the move to focus on the total organization.

In 1957 McGregor's work with Union Carbide started to solve the transfer problem. Shephard's and Blake's work at ESSO started in 1958 and found that top management's active support and on the job application were required for successful implementation. At ESSO the managerial grid of Blake and Mouton for measurement of group and individual behavior feedback was used and effort placed on group conflict resolution, team building, and consultation.

The second stem is specialized action research referred to as the survey research and feedback. Attitude surveys are made and form the basis of discussion and action by groups. Lewin in 1945 founded the Research Center for Group Dynamics at Massachusetts Institute of Technology. The results was a tool for introducing organization change.

The application of organization development has become widespread and exists in many countries including Australia, Canada, England, Holland, Japan, Norway, Sweden and the United States.

Industrial companies such as General Foods, EXXON, Union Carbide, Alcan Aluminum, Corning Glass, Texas Instruments, American Telephone and Telegraph, Polaroid, Donelly Mirrows, Bankers Trust, Imperial Chemical, Shell Oil and others have organization development programs of one form or another. Applications have not been limited to industrial companies but also include the National Aeronautics and Space Administration and other governmental departments, public school systems, universities, welfare agencies, churches and police departments.

II. PURPOSE OF THE STUDY

The purpose of the study was to determine the first year's results of introducing an organization development program in Huyck Formex. The first year cost of introducing the program was about 50,000 for consulting service, materials, supplies, and overtime pay for meeting participants, but not including any cost of additional hours spent by exempt personnel.

The strategies and objectives established by Huyck Formex to justify the application of an organization development program were to establish an organizational environment of collaboration between all members and functional departments such that organizational goals and objectives and organizational members' value and satisfaction were concurrently furthered. To this end, the program had to achieve a return to the company as a whole and to the company members sufficient to justify the time, effort, and cost of the program. The study attempts to do that evaluation.

III. DEFINITION OF TERMS

Ego needs. This is the name of the fourth level of Maslow's hierarchy of needs and refers to the individual's need for self-esteem, self-respect, and status.

Hygiene factors. According to Herzberg, these are factors relevant to salary, status, security and others which are directly related to job dissatisfaction.

Motivational factors. Herzberg's definition of motivational factors relate to growth, advancement, responsibility, and similar factors and impact directly on job satisfaction.

Normative. A normative situation is one considered to be the norm or the ideal.

Organizational management. Organizational management refers to the managerial style resulting from behavioral scientists' studies, focusing on how people do work and behave based on a descriptive assumption rather than a normative assumption.

Physiological needs. This is the first level of Maslow's hierarchy and refers to the need for food, water, air, rest and shelter.

Safety needs. This is the second level of Maslow's need hierarchy and refers to the need to feel safe against threat or insecurity.

Scientific management. This refers to the management style which places special emphasis on scientific analysis of jobs and follows the line normally associated with industrial engineering.

Self-actualization. This is the fifth and highest need level of Maslow's need hierarchy and refers to the individual's becoming self-motivated through achievement and self-development.

Social needs. This is the third and middle need of Maslow's need hierarchy and refers to the individual's need to belong and be accepted by others.

Structured management. This refers to the management approach focusing on the grouping of people functionally with clear cut chains of command and authority.

IV. THE SOURCE OF DATA AND SCOPE OF THE STUDY

The data used in this study were provided by Huyck Formex, a division of Huyck Corporation, a multinational organization with 1973 net sales of $64,598,800 and an employment of 2,920.

The data were from a division-wide program including functional departments of manufacturing, marketing, finance, product development and personnel with emphasis on the production organization. The data are from an organization housed in four separate building locations of administration and three manufacturing plants. The main administration building and two plant buildings are located in Greeneville, Tennessee, while a satellite plant is in Wake Forest, North Carolina. The data used came from records kept on all of these operations. The program was basically started in November, 1972, and the data cover periods preceding that time and through the end of 1973.

V. METHODS OF PROCEDURE

Since the case study of an actual industrial situation conducted is not in a controlled environment, efforts were made in collecting data to judge the effects of variables not otherwise measureable. Efforts were made to identify the limitations and possible effects of such variables relative to the more objectively measured variables.

Absenteeism, turnover and productivity were studied as well as informal studies of employee opinions. Even though the dynamic environment of an industrial organization impacts these quasi-objective measures, it was felt that these would be more indicative of the results of the program than would purely subjective measures.

Wherever possible, before and after data are used. Whenever possible, information is provided on environmental or personnel changes which may have had an impact on the results.

VI. ORGANIZATION OF THE STUDY

This thesis has been divided into six chapters of introduction, history of the organization studied, description of the organization development program, tabulation of results, discussion and conclusions. The case study was organized into literature and company records research, discussions with participants, and evaluation of several factors of production. The conclusions are based on these inputs and opinions.

CHAPTER II

HISTORY OF THE ORGANIZATION AND SELECTION OF THE ORGANIZATIONAL PROGRAM

In 1973, Huyck Corporation celebrated its 103rd anniversary of sales and service, primarily to the paper industry. In 1958, Huyck Corporation established a small organization located in Greeneville, Tennessee to continue an ongoing development of a new product to be sold to the paper industry. Approximately sixteen people were involved initially in this new phase of development work on a forming conveyor made of synthetic yarns for the paper industry. At that time, all paper forming conveyors were made of metal wire. It was considered to be a substantial development program and was reported in Fortune magazine in 1960. By 1965, the Huyck Formex Division was profitably marketing three commercial products. The three product lines consisted of a forming conveyor, a drying conveyor, and accessory equipment for the forming conveyor.

These conveyors are used on a paper producing machine. A typical machine has three major sections, a forming section, in which the wet sheet of paper or paperboard is formed and water is drained out by gravity and suction devices; a press section, in which water is squeezed out between rotating rolls; and a dryer section, in which water is removed by evaporation as the sheet is held against large steam heater dryer cylinders.

The forming conveyors are woven in an endless construction and may be as large as 216 feet long and over 30 feet wide. The paper machine generally uses one of these at a time and obtains an average operating life of 60 days per forming conveyor.

The dryer conveyors are provided so that they can be joined on the paper machine. These can be as large as 500 feet long and 30 feet wide. Two to eight of these conveyors are used at the same time on a paper machine with operating life being four to six months on the average.

The accessory equipment is specifically designed to operate in conjunction with the conveyors to increase dewatering of the sheet of paper. Unlike the conveyors, this equipment is basically a one-time purchase item except for some replacement parts business.

By 1971, the Greeneville, Tennessee plant had been expanded three times and had added a second plant location in Greeneville for the fabrication of the accessory line. Also in 1971, the division started construction of a second U.S. located plant in Wake Forest, North Carolina. Similar plants had already been built by Huyck Corporation in Canada, England and Italy.

In July of 1972, the Wake Forest plant started making the dryer conveyors and in July, 1973, the plant started producing forming conveyors. By December 1, 1973, Huyck Formex had grown to more than 500 people.

Huyck Corporation allows its divisions to operate in an autonomous manner. There are functional coordination aspects between the various functional counterparts of corporate headquarters and the division,

with the exception of finance. In the area of finance, the corporation exerts tight and stringent controls on the divisions.

In 1971, the General Manager of Huyck Formex Division decided to give serious consideration to an organizational development program. Visits by several executives of Huyck Formex were made to Corning Glass Corporation and Kimberly Clark Corporation where organizational programs were underway. Discussions were held with representatives from consulting firms providing organizational development services.

After investigating the possibility of using either outside consultants as change agents or developing the program on its own, Huyck Formex selected the American Training Academy. The selection was partly based on experience of a Huyck Formex sales program run by the American Training Academy and discussions with Pittsburgh Plate Glass which was utilizing their organizational development program. In addition, the President of American Training Academy, Dr. James L. Miller, agreed that he would serve as the principal change agent during the first part of the program.

Prior to the program, the division had put a lot of effort into employee relations through programs including company picnics, Christmas parties, sports teams, and fairly elaborate communication programs. The communication program included a quarterly report through meetings held with all employees by the General Manager. At these meetings the General Manager would report on progress toward the annual objectives. These were objectives which had been developed for the particular year and usually numbered between eight and twelve major

objectives per year. In addition, the Personnel Department held meetings to answer employee questions and even provided a vehicles through which anonymous questions and answers could be given.

While Huyck Corporation has divisions which are union and nonunion, Huyck Formex has operated nonunion since its beginning. There have been two union elections during the history of Huyck Formex, with the first one having a vote against unionization of 3 to 1 and the second election having a vote against of 4 to 1. Since the introduction of the organizational development program, there has not been a union election. There has been an ineffective unionization attempt of the Greeneville plant during the first half of 1973 which did not result in a vote. This attempt was revealed when an employee was fired for falsifying records. He filed an unfair labor charge alleging he was fired for his unionizing activities. The National Labor Relations Board investigated and dismissed the charges against the company.

Wages and benefits of Huyck Formex, both in Greeneville, Tennessee, and in Wake Forest, North Carolina, are among the community leaders. The division has not had a layoff or a production cutback during the past nine years. The division operates its two conveyor producing plants on a seven day per week, 24 hour per day schedule, while the accessory equipment plant operates on a normal single shift, five day week. In 1970, it introduced an unusual 12 hour per day schedule divided among four different crews in most of the production departments. The original introduction in the Greeneville plant was on a three day on, four day off arrangement of fixed schedules. The

Wake Forest plant was started up on a three day on, three day off rotating shift arrangement.

In 1969, the division was reorganized functionally into six major groups; manufacturing, marketing, finance, product development, project management, and industrial relations. In September of 1972, the Division was reorganized with all three plants reporting to one Manufacturing Manager while the Marketing group was split into two separate Marketing organizations to market the separate products of forming conveyors and associated equipment, and dryer conveyors and associated equipment.

The change in September, 1972, of the manufacturing organization was precipitated by a conflict which had developed to significant proportions between the Greeneville Manufacturing operation and the Greeneville based Marketing groups. The Plant Manager of the Wake Forest satellite plant was selected to be the new Manufacturing Manager.

In January of 1972, the manufacturing organization was reorganized to have three plant managers supported by three staff managers with functions of engineering, manufacturing services, and manufacturing technical services. Manufacturing services included industrial engineering and production scheduling, while manufacturing technical services included technical troubleshooting, training, start-up, new product production introduction, quality control, and process control. The reorganization included shifting the responsibility for product

quality from the functional product development group to the manufacturing group.

One area of conflict between the marketing groups and the Greeneville manufacturing group in 1972 received considerable emphasis through the reorganization. Product quality was emphasized with an expected increase of short term rejection rates. In addition, in May, 1972, the production work schedule in the Greeneville forming conveyor production plant was changed from a 3 day on, 4 day off, 4 day on, 3 day off schedule to a 3 day on, 3 day off fixed shift arrangement.

The processes and manufacturing techniques utilized by Huyck Formex in the manufacture of its products are unique. In some cases, the processes for manufacturing the products are patented. In 1973, the manufacturing function of the division was faced with increasing production of forming conveyors in the Greeneville plant and the start-up and transfer of production know-how and techniques to the new plant in Wake Forest. The start-up of the new plant in Wake Forest required a considerable amount of management time, manufacturing staff department support, and a number of hourly employees from Greeneville went to Wake Forest for training and start-up purposes.

During 1973, the manufacturing organization had a new manager, increased emphasis and assumed prime responsibility for product quality, started up a new plant, increased production in all product lines, expanded product lines, and introduced an organizational development program.

CHAPTER III

DESCRIPTION OF THE ORGANIZATION DEVELOPMENT PROGRAM

I. DESCRIPTION

The mechanics of the initial phase of the organizational development program were to change supervision to be more empathetic with subordinates and each other, provide training on how to supervise using Theory Y assumptions, and to establish work teams with all members of the organization being a member of at least one work team.

The desire and motivation to change were achieved through creating anxiety by means of a loaded test. Almost all members of supervision failed the test and the feedback to each supervisor indicated he was unqualified to supervise. The reaction was attentiveness to instruction, considerable effort made on outside assignments, and a strong desire to change. Increased empathy was approached by holding sensitivity type sessions between and among training group members.

Each person maintained a small note pad on negative feelings he would have in reaction to other people, what they might say or do. Each supervisor completed employee survey forms on all the people they supervised. One part of this form asked the question of whether they liked or disliked each person they supervised and why they liked or disliked that particular person.

Training sessions on how to operate under Theory Y assumptions included third party references through films, reports on behavioral scientists' studies and articles and books to be read. The outside assignments required about ten to fifteen hours per week in reading for each individual. This extensive outside work requirement extended for approximately the first two months of the program introduction.

II. CHRONOLOGICAL LISTING OF EVENTS OF THE INTRODUCTION OF THE ORGANIZATION DEVELOPMENT PROGRAM

On October 23, 1972, a list was published giving the names of 68 people, including all supervisors, selected to receive extensive training. These 68 were subdivided into three groups: upper management, middle management, and first-line supervisors. The initial training sessions were approximately ten hours each day for three consecutive days. The groups met on October 30, 31, November 1; November 6, 7, 8; and November 9, 10 and 11, respectively, for groups 1, 2 and 3. It was during the first session that the test was used to create a desire to learn, an exercise to introduce the concept of sensitivity to group members was conducted, and instruction was given on organizational development application. This session included people from all functional groups and from both locations of Greeneville, Tennessee and Wake Forest, North Carolina.

A special session for spouses was held for Greeneville personnel on November 21, 1972. This was a dinner meeting where information was given to the spouses of those going through the training so they might

be knowledgeable and involved in the training of each of the 68. A similar spouses session was held for the Wake Forest personnel spouses in early December, 1972.

A one-day follow-up session was held by Groups 1, 2 and 3 on December 13, 14 and 15, 1972. The purpose of these meetings was to provide additional training for work team leaders. Work teams had been established and work team leaders had been selected prior to this meeting. At this meeting, a policy statement on work teams was issued, Appendix A, and work team meeting guidelines were provided, Appendix B.

The work team leaders were divided into four groups and received an additional one day training on February 7, 8, 9 and 10, 1973. A review of previously covered and provided material was held and instruction on how to hold the initial work team meeting was given.

All work teams held their first meeting between February 28th and March 21st, 1973. An announcement was posted on all bulletin boards to all employees on February 23, 1973, explaining what was to take place, a copy of that announcement is in Appendix C.

At each kickoff session, the work team leader provided instructions on exactly how the work teams were to work. This included explanations on Theory Y management assumptions and participative management. At this meeting an "Employee Attitude Rating Chart", Appendix D, was given to all members of each work team. They rated factors according to the most to the least lacking at Huyck Formex. These were tallied to see what each particular work team felt was the most lacking in their present organization. The work team members were then asked if they

had a magic button which they could push and change anything at Huyck Formex, what would it be? From the Attitude Rating Charts and the magic button, a list of projects or problems was made for the work team to start working on at the next meeting.

At each kickoff meeting either the General Manager or a group manager stated that improvements in efficiency due to any work team's action would not result in loss of employment. A person might have to change the type of work he was doing, but he would not lose his employment. This promise would be voided only if loss of business should occur.

Each work team consists of 15 to 25 work team members. Work teams are made up of those people in a general work area, plus a few members from other areas upon which their decisions might impact. For example, a work team made up of the weaving department might also include a member from maintenance, a member from fabric finishing, and some from other related areas. However, the greatest majority were made up of a single department with their supervisor being their work team leader. During May and June, some of the production work teams felt they were not organized properly and a reorganization occurred among those teams through their own action.

There is one work team called the Work Team Council. All work team leaders are members of this work team. It is at this meeting that the General Manager, the work team leader, gives quarterly results so that each work team leader can present these to his own work team. The normal quarterly review by the General Manager with all employees was

stopped and replaced by the Work Team Council at the end of the first quarter of 1973. There is a team called the Organization Development Work Team. This team is composed of the General Manager and all of those reporting directly to him. The purpose of this team is to rule on policy change recommendations made by other work teams.

Each work team meets at least once a month. In the case of hourly paid employees, the employees are paid while they attend the meetings. Meetings generally last from one to two hours and minutes are typed and published on several bulletin boards throughout the building for anyone to read. A method for a work team to evaluate its performance and performance of its team leader is provided. Forms are filled out by each work team member on a regularly scheduled basis. The answers to the questions on the forms are evaluated through a computer program. Feedback is given to each work team on openness, effectiveness, and team leader performance.

CHAPTER IV

TABULATION OF RESULTS

I. INTRODUCTION

The majority of data presented in this section are in graphic form due to the confidentiality of the information. However, trends and comparisons can be seen and made. When the confidential nature of the data is not violated, numerical data are presented.

While collecting the data and performing the analyses, it became apparent that practically all the data were affected by other factors. Therefore, an attempt was made to remove the contamination or to examine and explain the results.

II. PRODUCTION

Productivity of the forming conveyors in the Greeneville plant was examined. Dryer conveyors and accessory equipment production were not evaluated since these were either being made on significantly different machines, with new processes, or in new plants.

The forming conveyor goes through three basic production operations; weaving, burling, and finishing. Weaving is done on extremely large looms, and the operator has considerable control over productivity and quality. The forming conveyor is an endless woven belt of exacting specifications, custom-made to be operated on a particular paper

machine. These belts can vary from 25 to 216 feet in loop length and from 5 to 33 feet in width.

Due to the variation in sizes, productivity measures are in square feet produced. Figure 1 shows the net woven square footage for 1972 and 1973. This data include net production but not rejections and damages charged to this department. Productivity data readily available are affected by design changes, installations of yarn supply which can take several days, and the number of days in a month. Therefore, the data used for plotting the graph are daily averages for two month periods.

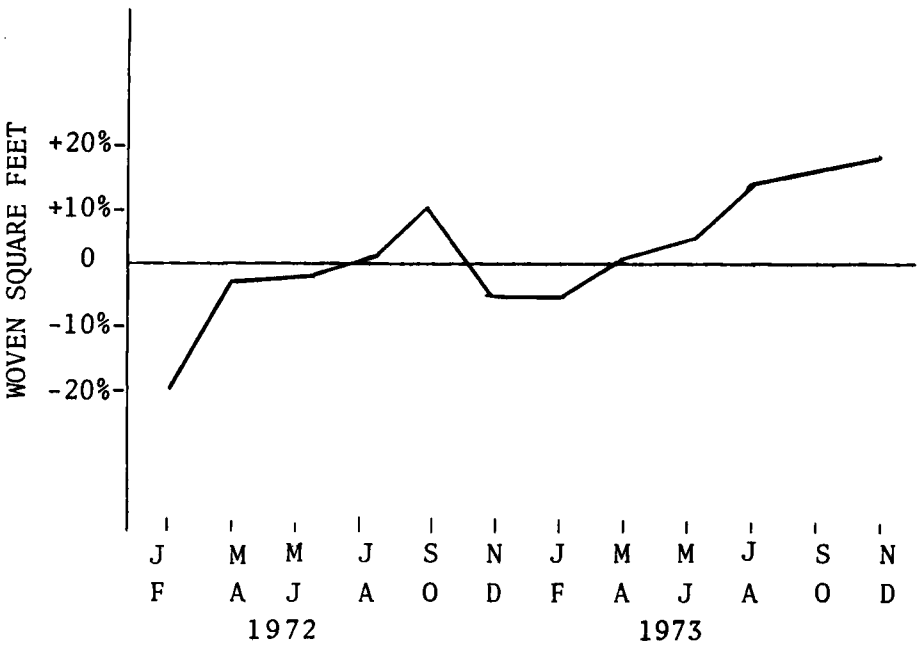


FIGURE 1

NET AVERAGE DAILY PRODUCTION WEAVING DEPARTMENT
(DAILY AVERAGE TWO MONTHS PERIOD)

The substantial variations in the production data indicated additional data collection and evaluation were advisable. Since product mix distribution in a time period could make significant total productivity changes, data were collected by product mix.

Given the loom productivity by product, a theoretical capacity could be calculated by time periods. This could be divided into the actual produced, resulting in a departmental machinery effiency measure. The plotting of this data is shown in Figure 2.

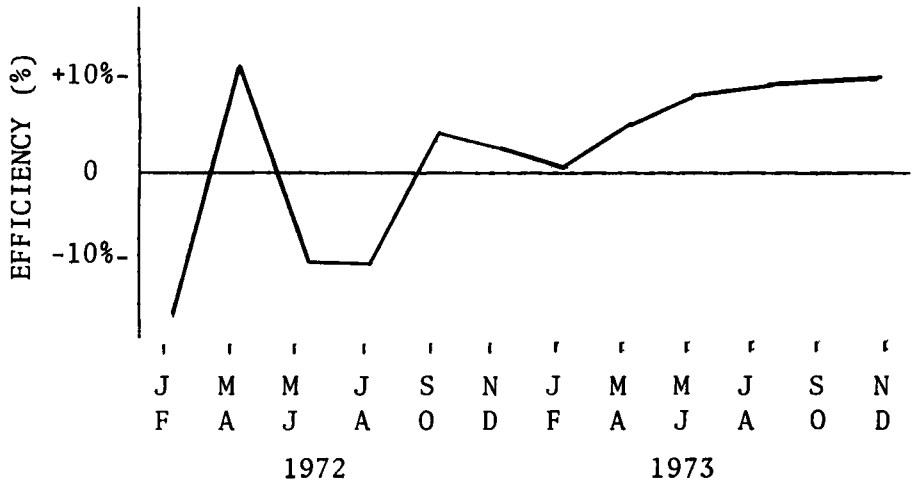


FIGURE 2

WEAVING DEPARTMENT EFFICIENCY (PERCENT)

Productivity data on the burling department was, for all practical purposes, inaccessible. However, from September, 1972 to September, 1973, this department staffing was reduced by 12 percent. A comparison of the productivity of the first nine months of 1972 to the

first nine months of 1973 indicated an overall 10.6 percent production increase. A comparison with an established parallel plant in another country gave a 36.9 percent higher productivity per person in September, 1973 for the Greeneville plant versus the other plant's burling department. The other plant is unionized and uses a traditional management approach.

Once the forming conveyor has been burled, it is finished through an involved heat stabilizing process. The net production for this department is shown in Figure 3. Net is the total square feet deemed acceptable to be shipped and does not include rejects and damages. The data are daily average production in square feet for two month periods.

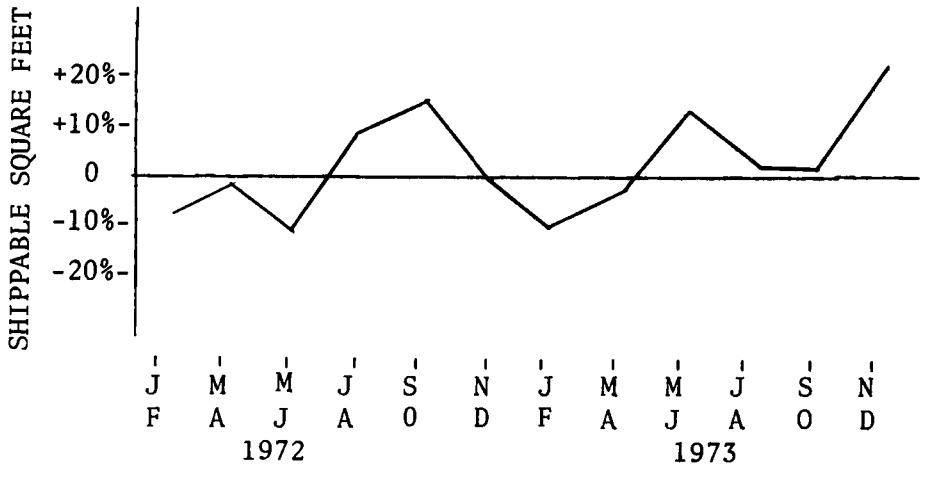


FIGURE 3

FINISHING DEPARTMENT NET AVERAGE DAILY PRODUCTION
(DAILY AVERAGE TWO MONTHS PERIOD)

The amount of time required to finish a forming conveyor varies mainly with the size, style, raw material, and processes used. By

these factors and determining the dates of process changes, the number of standard hours earned by actual production could be calculated. By dividing by the hours in actual operation in the time period, an efficiency measure could be obtained. The data obtained were used to plot the graph shown in Figure 4. The data are efficiency for two month periods.

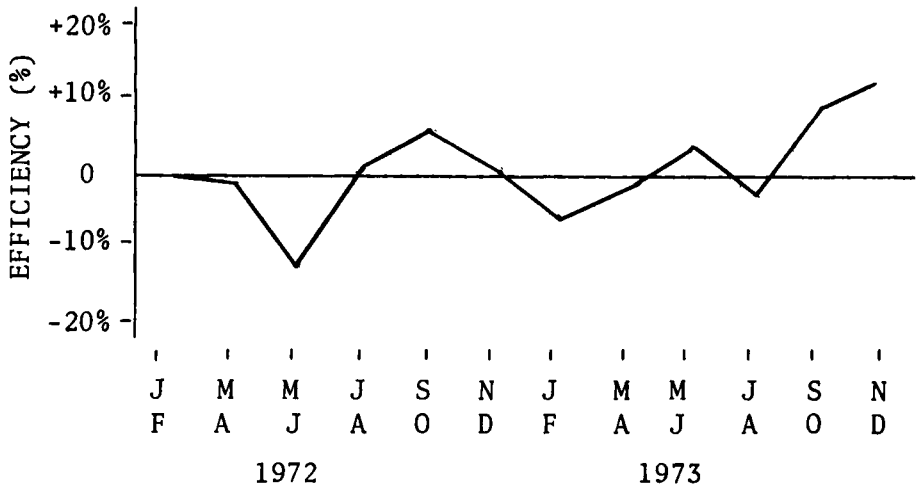


FIGURE 4

FINISHING DEPARTMENT EFFICIENCY (PERCENT)

III. REJECTS AND DAMAGES

Figures 5 and 6 show forming conveyor damages and rejects respectively for 1972 and 1973. Data are in percent of production for two month periods. Percentages are calculated for weaving damages divided by weaving production and rejects divided by production approved for shipment.

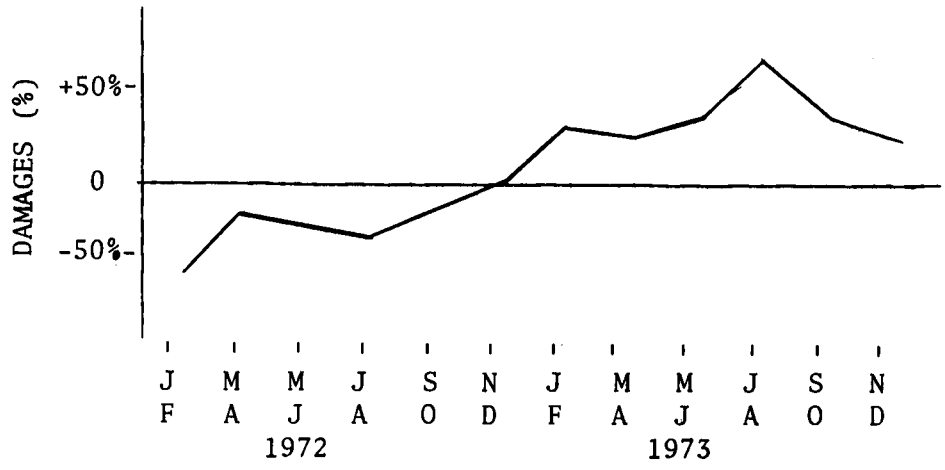


FIGURE 5

FORMING CONVEYOR DAMAGES

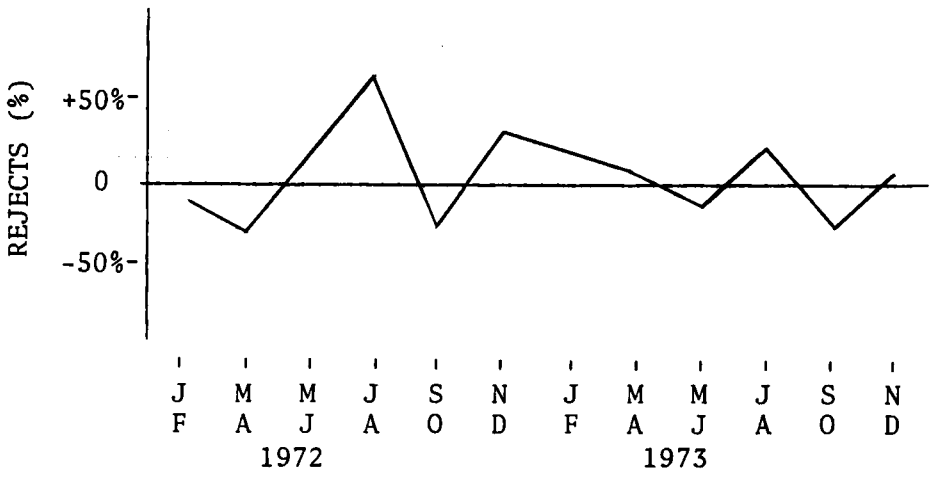


FIGURE 6

FORMING CONVEYOR REJECTS

IV. YIELD

Yield was a new measurement reported in 1973 but not in 1972. This performance measure includes damages through the process, rejects, and the material used in setup or start-up between conveyors. It describes the output of good product in relationship to the input of material.

Since this data was not collected in 1972, a comparison is shown in Figure 7 between the Greeneville plant and the same parallel plant used in the burling comparison earlier. In Figure 8, data from the Wake Forest plant on forming conveyor yield is shown along with data from Huyck Corporation plant which started producing forming conveyors at the same time. Neither of the plants used in comparison to Greeneville and Wake Forest plants are located in the United States, nor do they have an organizational development program. However, product lines produced, type of equipment used, and time in operation provide parallel situations for comparisons.

V. QUALITY

One of the major 1973 manufacturing objectives was to improve quality of the products. This was to be judged by reduced customer complaints issued by the marketing department on both forming and dryer conveyors.

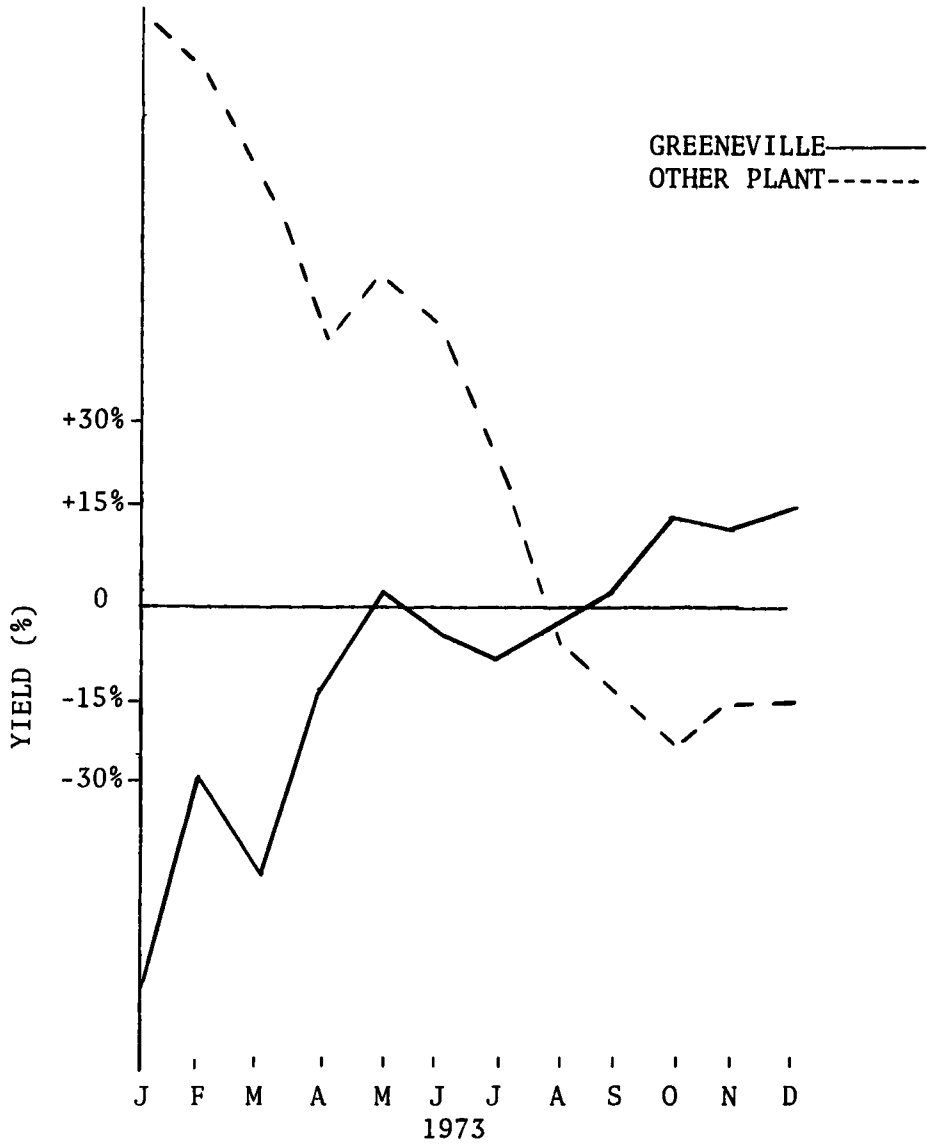


FIGURE 7

YIELD YEAR TO DATE AVERAGE

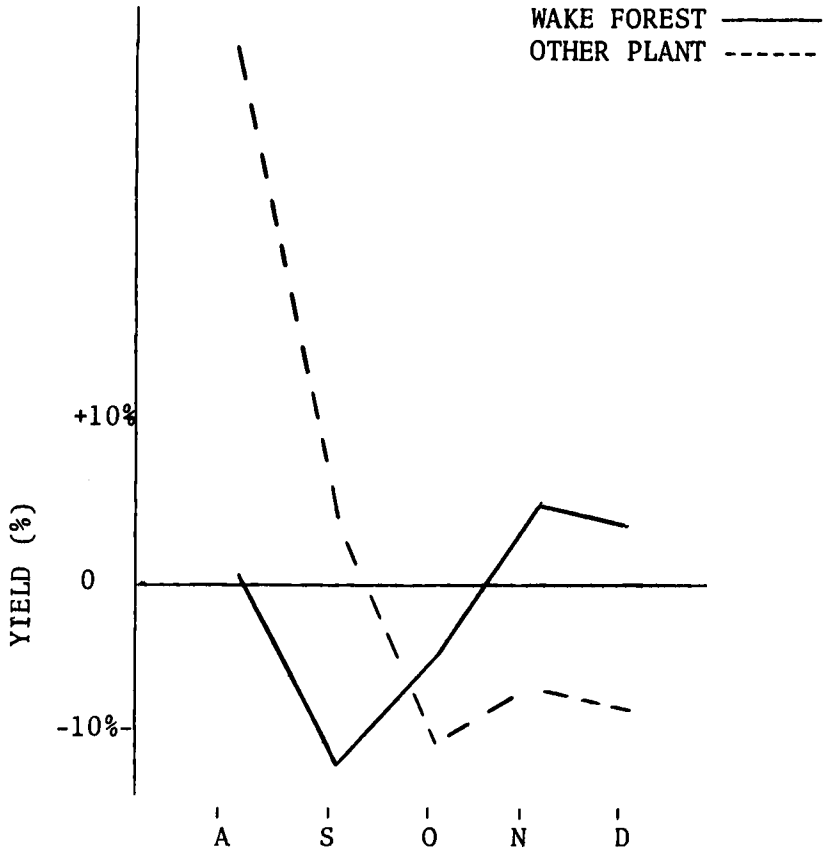


FIGURE 8

YIELD AVERAGE YEAR TO DATE

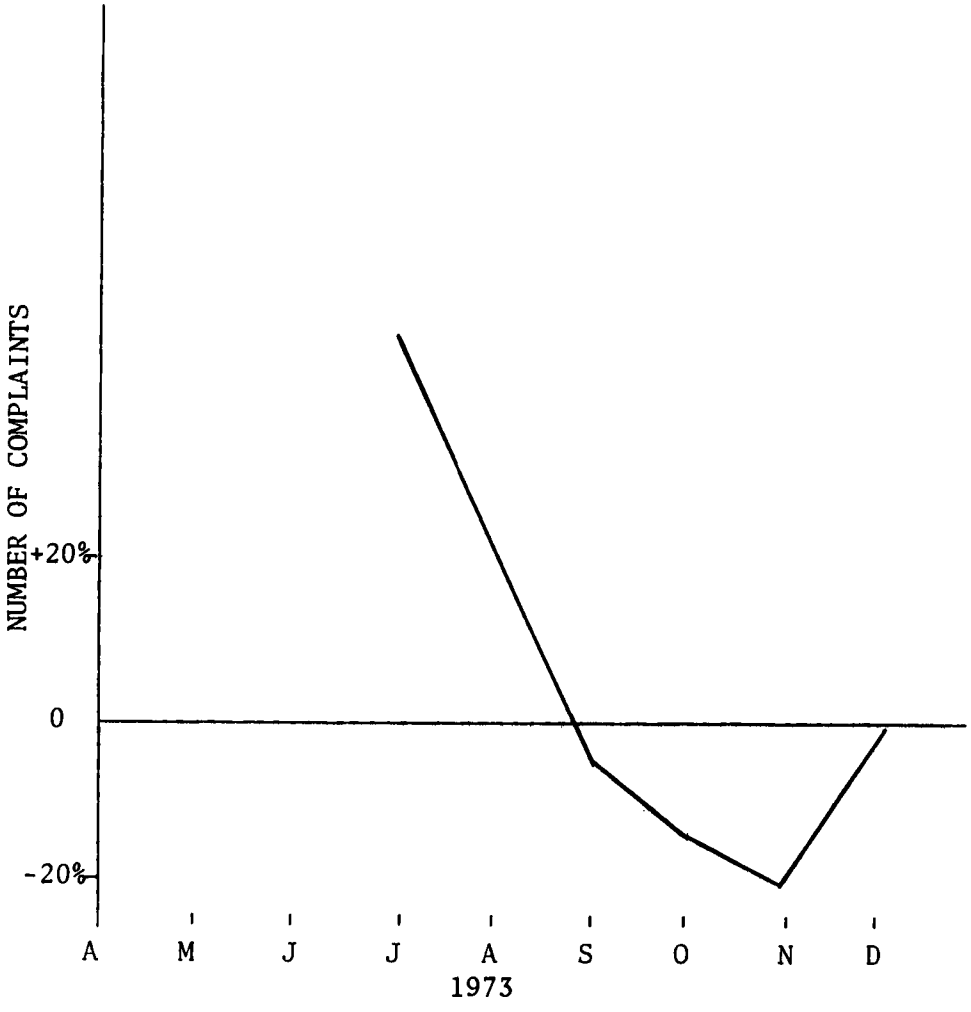


FIGURE 9

CUSTOMER COMPLAINTS FORMING CONVEYORS

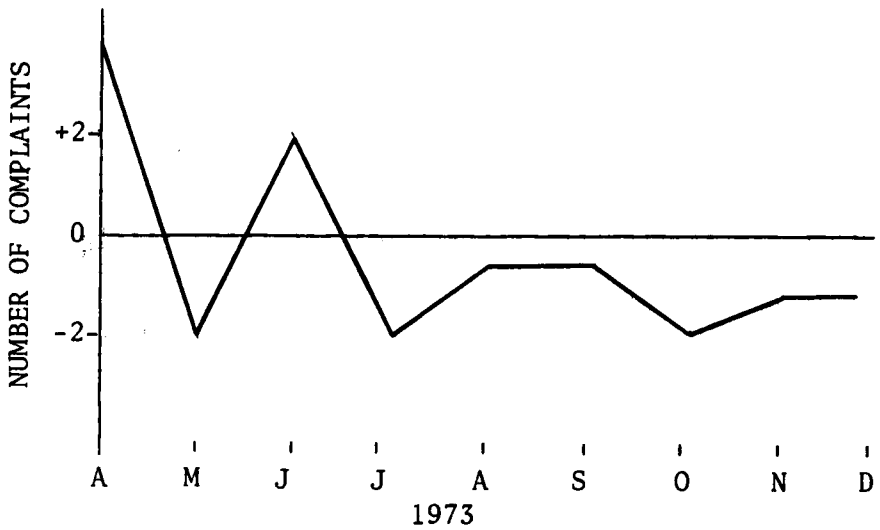


FIGURE 10

CUSTOMER COMPLAINTS DRYER CONVEYORS

VI. ALLOWANCES OR REFUNDS

Both forming and dryer conveyors are sold with performance guarantees. Reserves are maintained against shipments based on a quarterly statistical evaluation of historical allowances paid.

By the end of 1973, the percentage reserved for potential allowances against the forming conveyor product line was 49.2 percent of 1972 experience and 75.6 percent of the amount budgeted for 1973, while performance for the dryer conveyor product line was not comparable to that of forming conveyor and in fact there was some slippage. Allowance results for forming conveyor follow production time by about three months while for dryer conveyors, it is as long as eight to twelve months. Therefore, dryer conveyor allowances for 1973 were more a reflection of 1972 production than of 1973 production.

VII. ABSENTEEISM AND TURNOVER

Data covering absenteeism and turnover are shown by graphs, Figures 11 and 12. Data comes from all nonexempt employees at the two plant and one office building locations in Greeneville, Tennessee. Turnover includes voluntary and involuntary separations, and transfers to other Huyck Corporation plant locations outside of Greeneville.

Absenteeism is calculated by the number absent divided by the total number in attendance. A person out for extended illness is continued in the data until he returns or it is determined that person will not return to work.



FIGURE 11

GREENEVILLE ABSENTEEISM 1971, 1972, AND 1973



FIGURE 12

GREENEVILLE TURNOVER

VIII. MANAGEMENT STYLE EVALUATION

Rensis Likert categorized management systems in four groups as System I--Exploitive Authoritative; System II--Benevolent Authoritative; System III--Consultative; and System IV--Participative Group (Likert, 1961, pp. 237-248). In January, 1973, the Huyck Formex Division General Manager, the six group managers reporting to the General Manager, plus one plant manager, a sales manager, and two production superintendents completed a questionnaire analyzing the management system at Huyck Formex. In January, 1974, the same people filled out the same questionnaire. The results are shown in Figure 13.

IX. OTHER INFORMATION

Attendance at the work teams increased by four percentage points, gradually from the third quarter of 1973 through the first quarter of 1974. Excused absence for reasons other than lack of desire to attend were omitted from the data. Attendance was voluntary but all nonexempt personnel were paid generally at overtime rates. This improvement in work team attendance is judged to indicate an acceptance or positive evaluation of the organization development program by the attendees.

While the division had the reputation before the organization development program of working together, after implementation almost every visitor from other divisions commented with surprise at the degree of cohesiveness they observed. Despite the impact brought about by the manufacturing manager change, the organization development

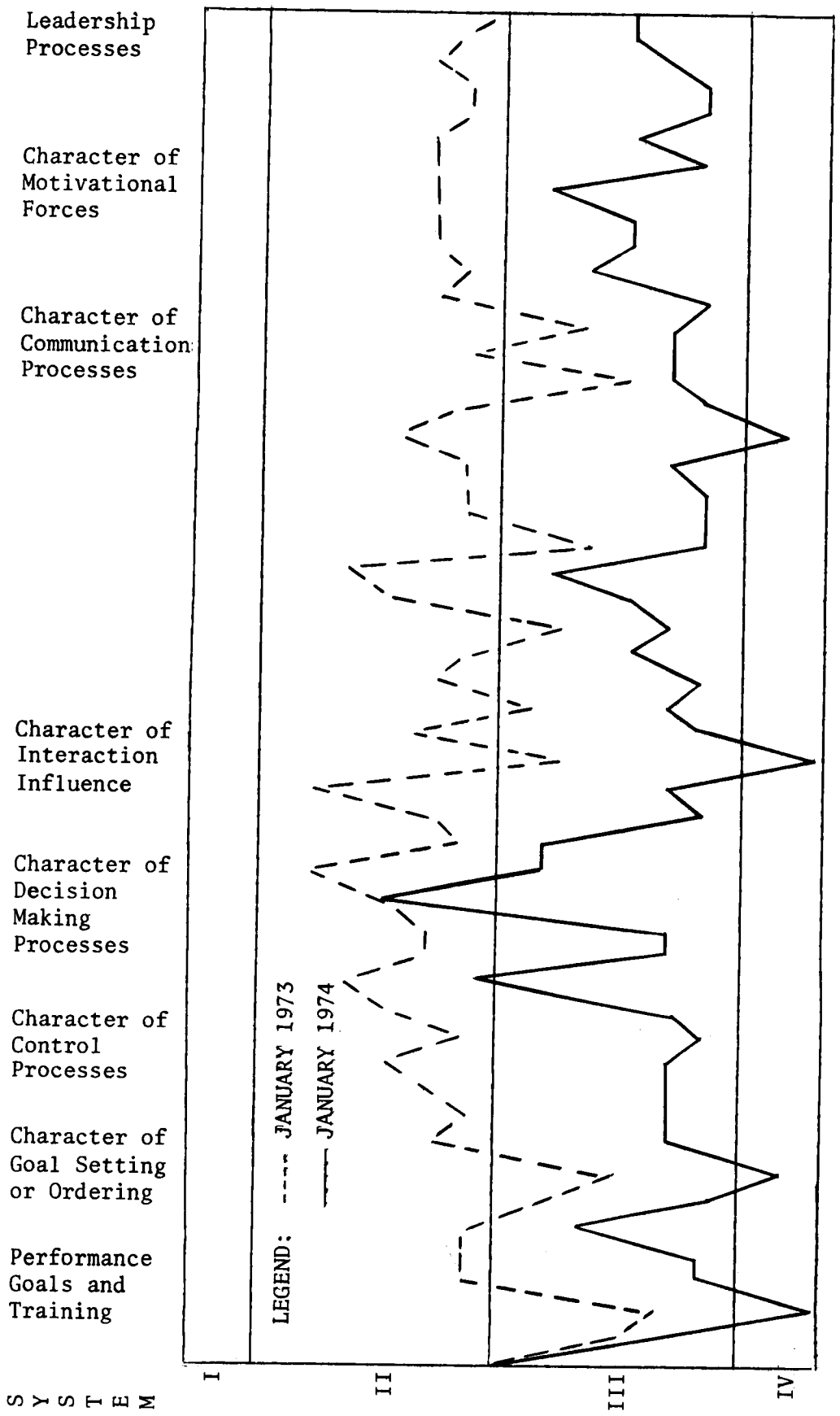


FIGURE 13

RESULTS OF QUESTIONNAIRE ANALYZING THE MANAGEMENT SYSTEM

was given significant credit for building a division-wide team environment.

During a visit by a corporate officer at the time of budget preparation for 1974, he questioned the amount of planned expenditure for the program in 1974. Based on his observations of improved working relationships since the program's introduction and the benefits apparently received, he wondered if the amount budgeted was sufficient to maintain and further the program. He stated that two to three times the 1974 budgeted amount could probably be easily justified.

Before the organization development program, the division had attempted several methods to secure suggestions and policy questions. Methods used included those covered earlier plus suggestion boxes, prize and cash awards, and bonus for suggestions but none of these produced the expected response. After the work teams started to meet, complaints, suggestions, recommendations and reports of action taken increased substantially. In January, each work team was asked to put in its next work team minutes a list of accomplishments and non-accomplishments for 1973. The average work team listed slightly more than eleven accomplishments. The total accomplishments of all work teams exceeded the best record of any previously employed suggestion system.

Suggestions and actions were stimulated in a few work teams when due to inflation a wage increase was announced in early 1974. This wage increase was unplanned and unbudgeted. The manufacturing manager and plant managers met with all production personnel in large

shift meetings and requested a productivity or waste reduction to equal this wage increase and to justify future increases.

One work team held a special meeting to discuss ways and means to achieve this increase. One employee made a recommendation to add a machine and an industrial engineering study found the recommendation would yield a return on investment of greater than 50 percent. The recommending employee was asked to fly to Cincinnati, Ohio to see several machines and recommend the model to be purchased.

A janitor recommended the discontinuance of some throw rugs and the cutting off of several banks of lights at night after he made his cleaning rounds. The annual savings were calculated to be more than twice the special increase he received.

The amount of productivity needed to equal the pay rais is posted in the cafeteria. Daily performance against the need is posted as a feedback mechanism. During the first month an improvement was not achieved. However, the second month shows an improvement equal to the increase plus making up half of that needed in the first month.

There have been some scattered negative reactions. One work team felt they were doing more than their part already and that other work teams should make up the difference. A few first line supervisors, industrial engineers, corporate and other division personnel continue to be skeptical about the organization development program. This group appears to represent less than twenty percent of the total employment.

It is hard to put a value on some of the information and opinions provided in this section. However, it is the writer's opinion that

these are the things which demonstrate the changes taking place in the organization and strengthen the faith in the expectation for two or more years hence.

CHAPTER V

DISCUSSION OF RESULTS

I. INTRODUCTION

The data were tabulated in a manner to attempt removal of known variables which would lead to erroneous conclusions. Despite this, the data cannot be assumed to be pure. However, where changes cannot be related to any other known influences, consideration of the impact of the organizational development can be given.

II. PRODUCTION

The net production data shown in Figure 1, page 23, provides some basis for analysis. In the first four months of 1972, the production change appears to be significant. However, a review of the changes in productivity for 1971 shows several changes of equal magnitude. In addition, equipment had been added and types of products had changed considerably between 1971 and 1972. Therefore, the first quarter change is judged to be a normal situation for those periods in relating more to equipment availability.

The changes in productivity in the last quarter of 1972 and the first three quarters of 1973 do appear to relate to a definite change in operation. Two observations appear reasonable. First, there was a

reduction in production and secondly, variations in productivity appear to be less drastic.

Figure 2, page 24, provides more insight into both of these observations. This graph is essentially an efficiency measure of the utilization of the weaving equipment in the Greeneville plant. The first observation of a decline in production in late 1972 and early 1973 is confirmed, but the decline is much smaller than shown in Figure 1, page 23. This efficiency measure shows a 14.5 percent improvement in the first nine months of 1973 when compared to the first nine months of 1972. In the first three quarters of 1972, the radical changes are very apparent when comparing to the following period, thus supporting the second observation.

Some factors affecting the organization during 1972 and 1973 were the change to one manufacturing manager in September, 1972, the reorganization of the manufacturing department in January of 1973, the organizational development training of supervisors in October, November and December of 1972, and the start of work team meetings in March and April of 1973.

One other factor, not covered in the data, is that by the middle of 1973, the equipment breakdown frequency had increased four times due to the introduction of a different raw material. This new raw material was being utilized by approximately 50 percent of the equipment at that time. The breakdown increase is confirmed by maintenance records and significantly increased machine repair costs accounting records.

Wage and benefits increases were given in October of 1972 and 1973. The reaction by the work force to these increases are considered to be about the same, with maybe a slightly better reaction to the 1973 increase. The change in work schedule for this department, from a 3 day on--4 day off--4 day on--3 day off, took place in May, 1973. The work force reaction was judged to be about 25 percent negative, 25 percent neutral, and 50 percent positive to this change.

In January of 1973, the manufacturing department assumed major responsibility for product quality. An in-process quality check group was established to inspect the forming conveyors immediately after weaving. If a conveyor woven on a particular loom was judged to be of low quality, this was communicated immediately to the supervisor. If the same condition was seen in the following conveyor being woven, it was damaged before completion and restarted after corrections were made. Basically the same feedback from final inspection was provided before and after January, 1973. However, the lines of communication appeared to operate better in 1973 since final inspection was organizationally part of the manufacturing department.

The productivity data from the burling department indicated an increase of 10.6 percent with a reduction of staffing of 12.0 percent when comparing 1972 to 1973. However, the increased quality coming from the weave room required less burling. Therefore, the data from this department are judged to be inconclusive. The same may be true for the comparision with another plant, but the 36.9 percent higher productivity cannot be totally ignored.

Figures 3 and 4, pages 25 and 26, respectively, are for the finishing department and correspond to Figures 1 and 2, pages 23 and 24, respectively, for the weaving department. However, a comparison of the efficiency of this department for net production shows a 2.8 percent decline versus the 14.5 percent improvement shown in the weaving department for the first nine months of 1972 versus the same period in 1973. Eliminating the period following June, 1973, observations of the weaving and finishing departments are consistent. Therefore, a closer look at the finishing department in July and August, 1973, was warranted.

The effect of machinery breakdowns and overhauls had been taken into consideration in Figure 4. There was an increase in rejection rate but the increase would explain less than 10 percent of the change. Absenteeism and turnover did not indicate any reason for the significant decline in efficiency.

Two changes did occur in July and September, 1973, which are of interest. An informal reorganization occurred in early July which resulted in a more structured and supervised department for about sixty days. In early September, a formal reorganization occurred which resulted in the creation of more responsibility for the hourly paid leadmen in this department. These leadmen worked both for the finishing and burling departments and provided some improvement in coordination between the two departments. Overtime was controlled by the leadmen and increased substantially in the burling but not in the finishing area.

III. REJECTS AND DAMAGES

The weaving damages in Figure 5, page 27, show a continuation of the trend of increasing damages in 1972 and 1973, but at a slightly higher rate of increase. Without the impact on weaving damages by the in-process quality checking and the accelerated machinery failures, this trend might have been improved. However, a review of available data would neither confirm nor negate this possibility.

Weaving damage and rejection rates for the first ten months of 1973 were 202 percent and 98 percent, respectively, of the same period in 1972. Quality specifications were tightened during 1973 and these efforts, if successful, should be seen in customer complaint and rebate reductions.

IV. YIELD

The yield rates shown in Figures 7 and 8, pages 29 and 30, respectively, are for forming conveyor product lines only. The two plants used in comparison are both unionized. In both cases of established versus established and new versus new, it is interesting to note improvements of plants with the organizational development program versus the decline of this measurement in the other plants.

V. QUALITY, ALLOWANCES, REFUNDS

Data available on customer complaints in 1973, Figures 9 and 10, pages 31 and 32, respectively, show decided decreases for both product

lines. This, coupled with the substantial improvement in rebate rate data given in Chapter IV, must be considered in conjunction with other data and information.

The creation of an in-process quality checking function, the transfer of quality responsibility to the manufacturing group, the increase in damages and rejects, and the organizational development program all occurred during 1973. The improved relations between manufacturing and marketing departments, thereby improving communications and teamwork, was evident in 1973.

Product quality improvements should affect order rate in a competitive market. The order rate for both conveyor product lines was substantially higher in the second half of 1973 when compared to the first half of the year. However, numerous variables impacting this could not be reasonably factored out. This was not considered to be conclusive, except that order rate did not decrease.

VI. ABSENTEEISM AND TURNOVER

Absenteeism is shown in Figure 11, page 34, for the three years 1971-73, since two previous changes occurred in 1971 which probably impacted on the absenteeism rate. These were the introduction of a 12 hour/day work schedule, and a 5 day/year sick leave benefit.

The 12 hour/day, 3-4-4-3, work schedule described earlier was introduced in the weaving department in March, 1971. About 50 percent of the people making up the data in Figure 11 are on the 12 hour/day shift. Since the data used for plotting the absenteeism

graph is total hours absent divided by total hours worked, a day of work missed will cause an increase due to the twelve versus the eight hour work day. If there was no change in the frequency of days absent, this should cause the curve to move up the scale by only 0.25 percentage points. However, absenteeism increased through the third quarter of 1971 by 1.3 percentage points.

In November, 1971, a 5 day sick leave benefit was announced. Under this policy, a person could receive up to 5 days/year pay for excused sickness. He was only required to notify his supervisor and have his supervisor's approval. Absenteeism rate advanced about 2 percentage points in 1972 when compared to the third quarter of 1971.

No major specific action was taken on absenteeism during 1973, with the possible exception of the organizational development program. The decrease in absenteeism is apparent from the graph on absenteeism.

Turnover decreased in 1973 compared to 1971 and 1972. The increase in November and December did not seem to be related to anything done by the company. The four month period of January-April, 1973, had the lowest turnover rate of the three year period. The increase in October, 1973, was attributed to transfers. One supervisor resigned and two requested transfers out of supervision following the introduction of the organizational development program.

Data was not presented on the Wake Forest plant since it was judged that the new plant situation and a local 0.8 percent unemployment rate would have significant influence on the data. However, one hourly employee resignation is interesting. Shortly after attending his first

work team meeting, an hourly employee resigned. He stated that any company wanting his opinion on how to run things would probably not be in business for very long. Therefore, he had applied for a job at another company and had been hired.

VII. MANAGEMENT STYLE EVALUATION

The management style appears to have definitely changed, at least as seen and evaluated by those participating in the evaluation. There was a definite move from Likert's Benevolent Authoritative to Consultative and in some areas all the way to Participative Group.

There seems to be improvements in acceptance of communcations indicating more openness throughout the organization and a feeling that this group could have more influence on the goals, methods and activities of their own units and departments.

However, this evaluation does indicate that confidence and trust of subordinates by supervisors have not increased at the same rate as other factors. This is also indicated in that little movement in lowering the level of decision making was made during the year.

CHAPTER VI

SUMMARY AND CONCLUSIONS

I. SUMMARY

The purpose of the study was to evaluate the results of introducing an organizational development program in the Huyck Formex company. The first year cost of introducing the program was about $50,000 for consulting service, materials, supplies, and overtime pay for meeting participants, but not including any cost of additional hours spent by exempt personnel.

Considerable efforts were expended to ensure the data collected provided reasonably accurate accounting of what occurred. Objective data were selected in almost every case as opposed to a poll of opinion of those participating in the program. Due to the confidentiality of the data, it was presented generally in graphical form so that trends could be seen. Changes were analyzed to see what the influences might have been.

It is hoped that this study may, in some way, aid the continuing development of management.

II. CONCLUSIONS

An industrial company with continuing technological change is not accurately or properly measured by numerical data alone. The dynamic

environment of the human organization must be concurrently evaluated. Only through the combination of the two factors can a complete evaluation be made. A numerical evaluation of the first six months of this program would probably have led to a conclusion of failure. However, the subsequent six months proved this would have been an erroneous conclusion. If an evaluation of the human change going on in the organization, at all levels, had been made concurrently, the second six months might have been predicted.

Douglas McGregor wrote: (McGregor, 1954, Antioch Notes):

> . . . Before coming to Antioch I had observed and worked with top executives as an adviser in a number of organizations. I thought I knew how they felt about their responsibilities and what led them to behave as they did. I even thought that I would create a role for myself which would enable me to avoid some of the difficulties they encountered.
>
> I was wrong! It took the direct experience of becoming a line executive and meeting personally the problems involved to teach me what no amount of observation of other people could have taught.
>
> I believed, for example, that a leader could operate successfully as a kind of adviser to his organization. I thought I could avoid being a "boss." Unconsciously, I suspect, I hoped to duck the unpleasant necessity of making difficult decisions, of taking the responsibility for one course of action among many uncertain alternatives, of making mistakes and taking the consequences. I thought that maybe I could operate so that everyone would like me--that "good human relations" would eliminate all discord and disagreement.
>
> I couldn't have been more wrong. It took a couple of years, but I finally began to realize that a leader cannot avoid the exercise of authority any more than he can avoid responsibility for what happens to his organization. In fact, it is a major function of the top executive to take on his own shoulders the responsibility for resolving the uncertainties that are always involved in important decisions. Moreover, since no important decision ever pleases everyone in the

> organization, he must also absorb the displeasure, and sometimes severe hostility, of those who would have taken a different course.
>
> A colleague recently summed up what my experience has taught me in these words: 'A good leader must be tough enough to win a fight, but not tough enough to kick a man when he is down.' This notion is not in the least inconsistent with humane, democratic leadership. Good human relations develop out of strength, not of weakness.
>
> I'm still trying to understand and practice what is implied in my colleague's statement.

McGregor's statements in the preceding leads to the first conclusion. Before embarking on an organizational development program, an organization should have a full understanding of the time and effort involved in putting the theory to practice. The extensive training and study time for the supervisors, meeting time, and time required for individual discussions and obtaining group concensus are significant. Observations after one year indicate more supervisory and management time is required when utilizing this form of management.

The second conclusion is that some production personnel, supervisors, and managers may find the transition difficult. This may result in turnover or loss of valuable, trained people.

Thirdly, it may be difficult or even devastating for an organization to return to a more structured organization after introducing an organizational development program. The reaction in the finishing department, of a sudden and substantial drop in productivity immediately following an informal return to more structured supervision, leads one to believe this type of negative reaction can be predicted.

Fourthly, an organization introducing an organizational development program should be ready to accept a short term decline in some productivity factors. The declines in both the weaving and finishing departments were most consistent. This may be related more to the new sensitivity of the supervisors, their confusion about exactly how to operate, and the resultant confusion of their people. It should be noted that turnover was the lowest in January, February, March and April, 1973 it had ever been for a single month in the two preceding years. There was no involuntary turnover during this period and it is felt that the sensitivity and empathy of supervision in combination with their confusion of the application of Theory Y kept them from making dismissal decisions for a three to four month period. The two highest turnover months of November and December, 1972, support the second conclusion. However, the return of and continued improvement in efficiency immediately following the initial work team meetings leads to the consideration of concurrently training supervisors and starting the work team meetings if possible. This may eliminate or lessen the initial decline in productivity.

The fifth conclusion follows Likert's conclusion that in the long run a System IV, Participative Group, organization will function at a higher efficiency level than traditionally managed organizations. Certainly some of the improvements can be credited to the management conflict resolution. However, the sustained gains, acceptance of the changes, better performance when compared to semiparallel organization, and immediate upswing following the initial work team meetings cannot

be ignored. Therefore, the fifth conclusion is that production improvements will be obtained through an organizational development program.

The sixth conclusion is that attitudes regarding the organization and how to more effectively function in the organization will change. The management style evaluation change report supports this. Working in the organization and visitors' comments of amazement of how well people and departments work together support this conclusion.

There appear to be future considerations, problems and opportunities. The work teams seem to pass through three phases. The first phase is the griping phase. This occurs usually in the first one to four meetings. After these complaints are aired and sometimes corrected, the team enters the second phase of improvement suggestions and actions to the factor of production. Once the team sees the success of their actions and recommendations, the third phase of asking for a share of the results of improvements seems to be entered. In this study, this third phase may have been accelerated or focused on money due to the high inflation rate in late 1973 and early 1974. However, it is expected that once gains are made and maybe even before, the question of what is in it for me will be asked. Upper management needs to be ready to answer the question by fulfilling the particular need or needs of the individuals in the organization.

It is the opinion of the writer, that after one year the organization development program studied is starting to meet the original purpose that the organizational goals and objectives and

organizational members' value and satisfaction be concurrently furthered. It can be argued that part of the achievements would have occurred without the program or that they were the result of management changes, learning curve effect, and other reasons. However, the positive changes in efficiency, customer complaints, absenteeism and turnover had not shown this rate of change during any of the five preceding years. Certainly credit can and should be given to improved management and more experience of the labor force, but it is the writer's opinion that the organization development program must receive part of the credit. The least of which is that it provided the environment to accept the management, methods, and technique changes implemented.

The writer holds the opinion that today's most effective management style is somewhere between the pure behavioral science view and the traditional management view. That neither by itself will be very effective in today's environment. The writer bases these conclusions on his experience and observations as manufacturing manager during the period studied. If the two views were the end points of a continuum, his view has shifted slightly from the pure behavioral view toward the traditional management view.

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APPENDICES

APPENDIX A

HUYCK FORMEX POLICY STATEMENT

ON OPERATION OF WORK TEAMS

I. PURPOSE OF WORK TEAM

Everyone in the Division is a member of one or more Work Teams. The purpose of Work Teams is to provide an opportunity for all employees to have input into decisions that affect their area of responsibility. The key to successful Work Team performance is the participation and involvement of every member of the Work Team. Work Team meetings involve time, effort and expense, and must result in improved performance for the Company and greater job satisfaction for the Work Team members.

II. METHOD OF OPERATION

General rules for Work Team meetings are spelled out in the "Work Team Meeting Guidelines", a copy of which is attached. More specific rules of Work Team operation particularly applicable to Huyck Formex are as follows:

1. Work Team meetings are to be held at least monthly and it is the responsibility of every employee to attend his Work Team meeting if at all possible. Meetings are to be scheduled in advance by the

Work Team leader. Work Team meetings should not last longer than one hour, although it is recognized that the first few meetings may run longer than this.

2. Each Work Team is responsible for developing specific objectives and action plans to implement these objectives. Work Team objectives should be in support of Divisional and Departmental objectives. Action plans that are developed by the Work Teams should include specifically what action will be taken, by whom, and by what target date.

Progress against each objective should be reviewed at each Work Team meeting and included in the minutes. Minutes should be written on each Work Team meeting and copies circulated to all other Work Team leaders.

3. Work Teams can invite non Work Team members to attend any Work Team meeting to provide information, clarification or assistance needed by the Work Team to come to a decision. Work Team leaders should extend invitations to non Work Team members and follow up to assure their attendance.

III. PROCEDURE FOR TAKING ACTION BY WORK TEAMS

1. Work Teams can take action on any item on which they agree providing the action is within the authority of the Work Team leader. If the recommended action is not within the authority of the Work Team leader, then it must be referred as a recommendation to that level in the organization where the necessary authority for approving the action rests.

2. Action can be taken by Work Teams as outlined above, providing the action doesn't violate any existing Company policy, doesn't set a precedent which would create a liability for other Work Teams or the Company, or does not infringe on the responsibility and authority of other Work Teams, If an agreed upon action does impact upon other Work Teams, it must be presented as a recommendation to other affected Work Teams for their agreement before it can be implemented.

3. Actions that involve the expenditure of money must receive prior approval in accordance with established Company policy. The cost must be estimated by the Work Team and a justification for the expenditure prepared. If the expenditure involves capital, the necessary Capital Expenditure Request form must be prepared and submitted for proper approval. In all cases where the expenditure of funds is involved, there should be an estimated return on the investment for justification purposes.

4. Although a Work Team cannot take action contrary to an established Company policy, they can recommend a change in existing policy for approval by the appropriate authority. Again, in all cases where such change in policy would impact on other Work Teams, agreement on the change by the other affected Work Teams should be obtained.

APPENDIX B

HUYCK FORMEX WORK TEAM MEETING GUIDELINES

1. The meeting atmosphere should be informal, comfortable and relaxed. Conduct the meeting on a first name basis and in an atmosphere where the group can be kept involved and interested. There should be no signs of boredom.
2. There should be complete participating and discussion by everyone involved. Discussions should be kept pertinent to the task of the group and objectives of the meeting. If the discussions get off the track, someone should bring it back to the subject at hand.
3. The task and objective of each individual meeting should be well understood and accepted by all participants. There should be free discussion on the objectives until they are so formulated that the members of the group can commit themselves to them. By use of probing, involvement and focusing questions, the meeting leader can accomplish this.
4. The members of the group must listen to each other. The discussion should not have the quality of jumping from one subject and idea to another. Every idea is given a hearing. People should not be afraid of being made to appear foolish if they put forth a creative idea, even if the idea seems fairly extreme.
5. There will be disagreement, but the group should be comfortable with this and should show no signs of having to avoid conflicts.

There should be no effort to keep everyone on a plane of sweetness and light. Disagreements will not have to be suppressed or overridden prematurely if they are fully examined by the group. The group should seek to resolve these problems and listen to them and not dominate the dissenting parties.

The group leader ensures that there is no hostility toward or domination of the minority.

The individuals who disagree should not try to dominate the group or express their disagreement in a hostile manner. Expression of genuine differences of opinion is extremely desirable. Person expressing these differences must be given a hearing in order that a solution may be found. Sometimes there may be basic disagreement which cannot be resolved in one meeting. The group should find it possible to live with this until they can be resolved so that they do not block the group's efforts. On other occasions when the disagreement cannot be resolved and action is necessary, it should be taken, but with open caution and recognition that the action will be subject to later reconsideration.

6. Most decisions will be reached by a kind of consensus in which it is clear that everyone is in agreement or willing to go along.

A show of hands is acceptable as an indication of the status of the team's progress toward consensus. The group does not accept a simple majority as a proper basis of action.

7. Criticism should be frequent and frank. The nature of the criticism should be constructive in that it is oriented toward resolving obstacles that face the group as opposed to placing blame for the existing problem.
8. People must be free in expressing their feelings, as well as their ideas, both on the problem and group operation. Everyone should know quite well how everyone else feels on a matter of discussion.
9. When action is taken, clear assignments and resolutions should be made and accepted.
10. The chairman of the group does not dominate the group. The leadership in this meeting may shift from time to time depending on the circumstances. Different members because of knowledge or experience will at various times act as resources for the group. There should not be evidence of power struggles as the group operates. The issue is not who controls, but who contributes and who gets the job done.
11. The group must be self-conscious about its own operations; frequently the group should stop to examine how well it's doing and what may be interfering with its operation. The problem may be a matter of procedure. It may be an individual's behavior that is interfering with the accomplishment of the company and group's operations. Whatever it is, it gets open discussion until a solution is found.
12. Your work team group meeting will progress as the members gain substantial amounts of sensitivity and understanding. The skills

required to conduct such meetings, and to create the setting described above, is required of all members, not the leader alone.

13. A work team can make any decision it wants as long as it does not violate existing company policy. If it does violate company policy and the work team feels a decision should be made, it must get a consensus from all other work teams across the company.
14. A work team can make any decision that doesn't set a precedent that has consequential liabilities.
15. Any decision can be made only as long as it has a payoff for the employees and the company.
16. Each work team has to make sure that decisions are being made at the appropriate level in the organization.

APPENDIX C

TO: All Employees DATE: February 23, 1973

FROM: P. C. Gill (Industrial Relations Manager) SUBJECT: Work Team Kick-Off Meetings

During the past four months, every supervisor within the Division has been working with Dr. James L. Miller, President of the American Training Academy, in preparation for the implementation of an Organizational Development Program based on Work Teams.

In the Work Team, each employee is given a voice in managing his own job by letting him share with the other team members in identifying and solving problems that affect him. We have over the years come to recognize the benefits of the team approach and look to our Work Team program as an opportunity to improve the total operations of our Company.

I am pleased to announce that we are now ready to hold our Work Team kick-off meetings and attached are several items for your review:

1. A Chart Which Depicts the Work Team Structure

   As you can see from the chart, we have established a total of 33 teams within the Division. Every employee of Huyck Formex should be a member of one of the Work Teams, and some employees are members of more than one Work Team.

2. A Listing of Work Team Members

   Please review this list to determine on which Work Team(s) you have been placed.

3. A Schedule of the Work Team Kick-off Meetings

   You should determine what team(s) you are on and then refer to this chart to see when your Work Team(s) will be holding its first meeting. We will be using both the Austin Street Training Room and the Snapps Ferry Road Conference Room for Work Team meetings. You will be notified by your Work Team Leader as to the location of your particular meeting. If there is any confusion on this point, I would encourage you to check with your supervisor.

In your first Work Team meeting your Work Team Leader will introduce Participative Management and explain to you how the Work Teams will function. Since there is quite a bit of orientation built into this first meeting, it is expected that the meeting will last approximately 3-4 hours. After this first meeting, your regular monthly meetings will be much shorter, probably lasting approximately one hour.

You should note from the schedule that because of the length of the first meeting, we have asked many of our employees in Manufacturing to attend Work Team meetings on their off days. These employees will be compensated for attendance at these meetings in accordance with Company policy.

You have probably all heard the expression, "when the going gets tough, the tough get going." I think we are all well aware that 1973 is going to be a tough year. Our customers now have an alternative to Huyck Formex, and if we don't compete in terms of quality, delivery, price and service, our customers will buy their fabrics from another supplier.

I'm confident that by pulling together and pooling our talents and abilities we will be able to meet and beat the competition we now face. Our Work Teams give us the opportunity to build the type of team work we now need but to be a success we need your active participation.

I know that Gordon Chalmers (Division General Manager) anticipates sitting in on mnay of the first Work Team meetings, and can assure you that the management and supervision of the Company are both interested and enthusiastic about this new program.

PCG/ss

APPENDIX D

Instructions: Complete the rating chart below by picking out the attitude which is in your opinion most lacking at Huyck Formex and writing the number 1 next to it. Now, pick out the attitude which is second in terms of needing improvement and write a 2 next to it. Repeat the process until you have rated all 10 items.

EMPLOYEE ATTITUDE RATING CHART

ATTITUDE	MY RATING
Help on personal problems, job and home, financial (career counselling)	_____
Interesting work	_____
Fair wages as compared to other industries in area	_____
Job security	_____
Trust	_____
Tactful discipling and meaningful counselling about job	_____

Full appreciation for work done _____

Feeling of belonging _____

Good working conditions _____

Promotion in the company _____

VITA

David Walter Thomas, Jr. was born in Asheville, North Carolina on May 19, 1938. He graduated from Lee H. Edwards High School in 1956. He graduated from North Carolina State University with a Bachelor of Science degree in Mechanical Engineering.

While employed by Huyck Formex in Greeneville, Tennessee he attended night classes at The University of Tennessee, Kingsport University Center, receiving the Master of Science degree in Industrial Management in June, 1974.

His work history with Huyck Formex included field service engineer, sales engineers, product manager, manager of product management, manufacturing services manager, new plant project manager, manufacturing manager, and in June, 1974, assumed the task of establishing a new division for Huyck Corporation. He is to be the vice president and general manager of this new division.