

Human Relations in Industry

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FOR over one hundred and fifty years civilization has been made vividly aware of a rapidly developing and enlarging social system whose productions have affected and enriched all phases of human existence. The exponents of the several levels of the system have had bitter, constant and continuing battles. There seemed to be no common meeting ground. Political parties grew out of these struggles. Novelists made fortunes on the portrayal of their struggles and misery. It was only in the latter part of the 19th century that the detached, unbiased study of the factors involved was begun by sociologists. These works have been largely ignored.

From 1910 psychology began to show interest in the clinical aspects of the human reactions in industry. In 1913 Hugo Munsterberg, in the United States, published "Psychology and Industrial Efficiency."¹ This book has served as a model for the development of the subsequent studies of industrial human relations. However his work was somewhat like Watson's Behaviouristic school—physical studies of monotony, fatigue, environment, buying and selling—all measurable "scientifically".

During World War I psychologists and psychiatrists became more aware of the human reactions in organizations; tests and rating scales were added to investigating techniques. Then the Depression of the 1930's brought out employee attitudes more clearly than ever before; and

World War II showed how important the disciplines which dealt with emotional reactions, applied psychology and psychiatry, were in raising morale, settling strikes, increasing output and selecting personnel.

These general historical facts show the development of a deepening, vital interest in the human element in this important modern structure.

II

IN 1927 an experiment was begun in the Hawthorne division of the Western Electric Company, Chicago, which in the twelve years it was maintained, disclosed the great complexity of the problem of production in its relation to efficiency and from it developed a better understanding of human reactions which aided in training supervisors in more human and effective methods of dealing with their workers.

The Hawthorne experiment was the first research of its kind. It was begun because the Western Electric Company felt there was "a considerable deficiency in their knowledge of the intangible factors in the work situation that affect the morale and productive efficiency of shopworkers". The late Prof. Elton Mayo, of the Industrial Research Dept., Harvard Graduate School of Business Administration was the guiding light. The staff under him was from Harvard and other Universities; and the Company supplied many psychologists and personnel directors. Prof. F. J. Roeth-

lisberger, Professor of Human Relations, Harvard, and Wm. Dickson, Chief of Employee Relations Research Dept., Hawthorne works, have reported the survey in a 600 page book labelled *Management and the Worker*.² They are widely quoted.

The Western Electric Company had only expected a year or so of tests to gather exact knowledge about the relation between conditions of work and the incidence of fatigue and monotony among employees. However, as will be seen, each experiment raised problems which entailed further tests to elucidate, and the number of employees involved went from five to 22,000.

The Hawthorne studies can be divided into five major parts:

(a) *Experiments in Illumination*:—In the first experiment, in Illumination, the test groups and the control groups were placed in separate buildings. This was done to eliminate competition, because the criterion of change was the increase or decrease of the number of units each worker produced in a given time. The control groups had no change in illumination, merely being moved to a different location. The test groups had many changes in illumination, from very bright lights to ordinary moonlight intensity.

The results of the first test showed equal increase by control and test groups. The remaining tests on illumination showed the same results. Something occurred in the workers in the test changes which was intangible and the experimenters wanted to find out what it was. Because of the unexpected findings of these tests, the next experiment, Relay Assembly Test Room was started.

(b) *Relay Assembly Test Room*:—This test, like the fourth study, is named after the type of work these workers did. The Relay was a small unit assembled by hand, and the number done daily was around 500, per individual. Five girls were chosen who were willing to cooperate and who were experienced in their work. They were placed in a separate room with standard operating layout, and they did the same work they always had done, while each unit they did and the time taken to do it, was counted, hourly and daily. They remained in this test situation for the next

five years. An observer was always present in the room, who took complete daily histories of what went on among them at work, and who was supposed to help maintain a friendly atmosphere. All physical environmental factors were constantly checked, such as temperature, humidity, food, sleep, etc., and the girls had physical examinations every six weeks.

Following a period in which the basic output of each girl was established, hours, rest periods and wages were changed. Each change was discussed with the girls by the observer before being put into effect. Each change lasted around five or six weeks.

With every alteration in the work conditions, production increased; shorter hours, longer rest periods, lunches at work, five day weeks. (These tests were being done, by the way, during the 48 hour week period in industry). The girls themselves couldn't understand the reasons for the increased production. They were doing more work in less time and were happy about the results. They were somewhat suspicious about receiving their pay for six days work when they worked five days. They also didn't expect to receive their bonuses for the increased production. They distrusted the company.

The experimenters themselves were greatly surprised by the results. They were unable to understand fully the mechanism behind the increase. They also found it difficult to understand the mistrust of the girls regarding bonuses. They gave questionnaires to the girls asking them to list the reasons they thought they did better in the test room. Their reasons were "greater freedom"; "absence of bosses"; "more personal attention"; "opportunity to set one's own pace". A further questioning found the answers focussed on one point: freedom from rigid and excessive supervision. This, the girls felt, was the prime cause of the increase.

The experimenters then felt they should bring the girls back to the reality of the prevalent working hours and no rests; that is, six day weeks. The girls were told about this and also told it would last three months. When this change was effected, production rose higher than at any other

time. The experimenters were naturally flabbergasted. From all the arguments of unions this should not have happened. It had always been understood that taking away already granted privileges would lower morale and cause lowered efficiency. It was not happening here.

It was then found that although the work conditions had returned to the usual status, the girls had not. They were acting differently. They were acting informally and happily as a closely knit group; helping each other, making up the work for slower members who might be ill; taking their own time off; joking among themselves and with the observer. The observer had become a friend to the group and he was often consulted about personal problems in and outside work.

Because of the change in attitudes of these employees, and from the content of discussions the girls had among themselves and with the observer, the company decided to undertake a mass interview of the company employees to gain further information about employee attitudes. This was the third study. It ran concurrently with the fourth study.

(c) *Mass Interviewing Programme*:—In the following three years 22,000 employees were interviewed. In the first year they planned on only 1600, which is all they did. So much valuable information was learned from these that each year the number interviewed increased, and in the third year alone over 21,000 were done. The depression and lay-offs caused discontinuance of this.

The interviews were at first directive, lasting about 30 minutes. Soon, however, it was found that the employees wanted to talk about many more subjects than the interviewers were prepared to ask questions about. The employees talked about themselves, their work, their homes, their families. They were careful at first in their remarks about the company supervisors, foremen and management, but when they found that the interviewers were not using information against them, they freely gave their opinions. The interviewers had found in the meantime that their directive techniques were too binding, and

became so non-directive that their interviews lengthened to an hour and a half, and their files on the workers from three pages to ten.

The investigators began to find that besides gaining information on attitudes, the employees were being helped in their problems. This became the object of a later study. What the company found could be used as the interviews progressed, were suggestions the employees gave regarding management-employee relations. This was embodied in a further study and also used immediately in training supervisors. From the discussions of groups of men, the company found that there were definite social groups with their own leaders scattered all over the company. These groups functioned at their own speeds in spite of supervisors, and/or bonuses; they raised or lowered their production as a unit; admitted and expelled members; and seemed to pay little attention to outer influences, be it other workers or even management. From the realization of these social groups the fourth study was done. This was the Bank Wiring Observation Room Test.

(d) *Bank Wiring Observation Room Test*:—This was composed of fourteen men of six different nationalities. These men had already been formed into a closely knit group in their regular work, and they were chosen for study because they had a restricted output for which no reason could be found. They were observed for 6½ months, when the study had to be discontinued because of the depression. The investigators felt they found some important concepts of social groups within the formal company organization.

They found the men reacted differently than the girls in the Relay Test. There was no increase in production with more personal interest being shown in them. In fact, throughout the study, the output of the group did not change from what it always had been. One or two of the members were fast workers, but when they reached a certain amount they would stop, and help someone else. If a worker produced much more than his average, he was ridiculed by the group and warned to slow

down. They had rational arguments for their behavior, such as: If we produce more than necessary at the present time, we won't be needed by the company, and some of us will be out of jobs; also: Even if we produce more than we are expected to, they won't pay us for it; also: If this group shows marked increase in output, the whole company rating scale may be affected. There was a constant feeling of distrust of management.

However, the group reprimanded the worker who was too slow reaching his quota, and felt he was a poor workman who lowered the efficiency of the group as a whole. It appeared to the observers that gaining the approval of the group was a more powerful incentive to the workers than higher wages, or desire for advancement; that if a worker resisted the pressure of the group and continued too slow or too fast, he would find himself being isolated and expelled from the group socially. They found that those workmen who were moving from job to job, company to company, were just such deviates. Management couldn't understand it before. Such workmen seemed to have ability, but they didn't stick. The Hawthorne test among these fourteen men, and the concurrent interviews, showed how important were the human relationships in these informal social groups, and how powerful their effect was on the productivity of the company.

(e) *Personnel Counselling*:—The fifth study, personnel counselling, was not put into effect until four years after the last study. It may be regarded as the culmination of the experimenters' efforts to bring employee and employer interpersonal relationships into better focus. There were two objectives: the first was to set up an agency which could help employees with their problems and work with supervisors on their methods of supervision. The second was to improve the method of communication within the company, in view of the ample evidence indicating that it was lacking in certain situations when the social organization conflicted with the managerial organization. College graduates were selected and trained in interviewing, especially non-directive; they then

were assigned to departments. Each counsellor covered an average of 300 people, and had permanent offices where they could always be contacted during working hours.

The counsellor had no authority. He was primarily oriented to the human problems of the organization. He came to know the supervisors and the workers. One of the major objectives of this counselling program was to strengthen rather than weaken the supervisor-employee relationship. The previous study in interviewing had given the employees some faith in the company's pledge that confidences would be respected, and the counsellors had status almost immediately. Through this faith in the confidential interviews, the counsellor soon had access to the usually closed circle of the informal groups, besides to the formal organization. The counsellor was accepted and not treated as an outsider or as an informer. The counsellors were able to diagnose and aid in solution of many of the employees personal problems. They were able also to advise the supervisors, foremen and managers with more security, having access to both sides of opinion.

III

FROM this programme, as can be easily understood, there developed a more satisfactory relationship between management and worker. The results stimulated other investigators to further examine these complex problems of management-labor relations. From the broad study of mass relations, the field narrowed to the individual interpersonal relations. The Hawthorne study is important as being the first time industry considered that the employee is a human being with a personal history and background, and that he takes his problems as a complex being into his work situation.

Healthy Organization

The healthy organism should always be studied before one diagnoses disease. In this study we can start at the smallest unit, the individual, as one would start

with the cell in medicine or the atom in physics. To understand industrial organizations in any concept we should examine the basic reasons of why people work at all and build up from there. This may sound superfluous, but the reasons are important for they underlie the main drive to work and are behind the constant shift of the organizational strata. This list I have taken from Tredgold's book, *Human Relations in Modern Industry*.³ I found many of them reiterated in other books. They may seem subtle in their differentiation, one from the other, but with further thought, they are different. They are not listed in order of importance.

(a) *Search for material security.* That's natural, we all feel. However, it is not accepted as important by many missionaries and scientists.

(b) *Personal responsibility.* This is not only to oneself but to others such as family.

(c) *Desire to conform to type.* We recognize this: everybody is supposed to work; and at the same work one's society does.

(d) *Desire for approval of group.* This is somewhat similar to the last, but in a narrower, more intimate sense. The behavior of the 14 men in the test group at Hawthorne showed this.

(e) *Desire for preeminence.*

(f) *Pride in skill.* This does not necessarily mean the same as the last; it may have no connection. Artists, musicians, scientists—anyone doing creative work must have this motive.

(g) *Sense of order or routine.* This seems to appear in the less intelligent and less enterprising.

(h) *Acquisitiveness;* just to amass money, power.

(i) *Compelling conscientiousness.* We may consider this a pathological one, as in an obsessive-compulsive neurotic, but it is a common one, often seen in organizational employees.

And so people are working, and in our study they are in an organization, not

alone, and each with his own motive for working. In the healthy organization recognition is made of the employees' personal needs in pension plans, insurance for sickness, injury and death; safety and health programs; recreational, social and athletic activities; sometimes adult education programs; and in some places, company homes for employees. The healthy organization also attempts to train its supervisors in dealing with their workers.

In 1927 the Hawthorne works had all these plans plus some training for its supervisors, and an Industrial Relations Branch in each department. With all this apparent understanding of the employees' needs, and a Relations branch to find out more, the company realized there were more intangible factors which affected morale and production, and which they could not identify nor explain.

There was another company which did not have such discernment and suffered for its inability to appreciate these intangible factors. It had some of the most modern factory buildings in the United States. It paid good wages, had all the programme outlined above for the workers. There were playgrounds, sports fields, theatres, even a town for the employees. Anyone seeing all these tangible signs of a progressive industry would not have imagined dissatisfaction in the workers. However, the plant had to be closed because of a strike of its employees. Investigation revealed an overly paternalistic attitude of the owners towards the employees. They were smothered with ownership: the town named after the owners, many of the streets named for parts of the product, and they were told what to do, where to live, and even led to where they could play. They also had no union,—no chance to be able to "talk back" to the paternal figure. Until the company recognized a union of the employees, and permitted subsequent discussion between employer and employee, the employees refused to work. Other demands were also recognized, but they are not necessary to this discussion.

IV

IN the modern industrial organization, there are few owner managers. The companies are usually owned by stockholders, and there is a superintendent at the head of each branch. From there down there is a gradually decreasing field of responsibility and status.

The formal organization of industry from superintendent to the operator or worker is called the formal social organization. How it works socially can be understood by one who has worked in any industry or has been in the armed services. There are definite social strata through which one goes unofficially with self-consciousness and some trepidation. The work for each strata is laid out, but the behaviour is implicit in the individual. Some organizations, such as the services, lay down definite explicit rules of behavior. In industry the behavior of the employees are constant inside and outside the work situation towards other strata. They live in the same strata: their friends, clubs, entertainment, the places they eat or drink, and even the churches they attend—the areas in which they are—are apart. Though each worker may aspire to rise through the formal organization, through genuine effort, or, as in some organizations, by marrying the boss' daughter, while he is in one stratus, he is expected, almost coerced to, act like that stratus. The movement of the worker may be on a horizontal level—as from a job in one department to a similar one in another plant. As long as he is doing the same kind of work, he remains in his stratus. However, even in his stratus, his seniority raises him above his fellows. This still is in the formal organization.

In the Hawthorne experiments and interviews, another organization was discovered—the informal social one. This one is formed through inter-personal relationships, not by stratus or seniority. The power it wields surprised the company, but was known to all the workers themselves. Though the Hawthorne tests were done only with operators and supervisors, these informal groups are known to function among the members of other

levels, even among the executives.⁴ The informal groups may strengthen or weaken an organization, by co-operating or not with the formal organization.

The strata which the informal organizations may bind in any single group are limited—the spacing cannot be too great, for several reasons. Contact, for example, between executive and operator is too infrequent to allow communication close enough; also in the present set-up of industry each stratus would not permit their members to bridge such a gap—it would be detrimental to the discipline and morale of the rest of the stratus.

Removing members from these groups individually could upset the routine of the whole group, and also affect morale and work of the individuals removed. As one worker said: he knew he could do better in another part of the plant, with more money and chance of faster advancement, but he felt he would have to start all over again getting to know the fellow workers, and he found it pleasant and satisfying to stay where he was.

Roethlisberger⁵ has said that “problems of change in the social structure” was one of the significant human problems to management. We have mentioned one form of change above. Another change is technical; that is, in forms of machines; layout of rooms, changing of tools, and location of factories—areas in which the employee has to deal with new situations, with the group intact. Many companies have sprung surprises on their employees with new types of machinery, which they thought should ease the employees' labor, give them satisfaction and thereby increase production. Progressive companies have added newer inventions in rapid succession, many of the additions being simpler and easier to maintain, and found the men dissatisfied and production down. Investigation in several studies, revealed that the men were not resentful of the new machines themselves but that the changes came too quickly and too often. The investigators found that if the changes are explained to the employees in advance, are not changed too suddenly or too often, the employees can adjust to the change. They found that “variations in work be-

havior could be related far more closely to variations in personal attitudes towards the changes introduced⁶ than towards the changes themselves.

V

THE second human problem to management was of control and communication.⁵ It was noted in the preceding discussion of changes in the social structure that control of the work behaviour could be aided by explanation of the change before the change occurred. This was an example of satisfactory communication. We all have been made aware of attempts at communication, with the intent to control behavior, in bulletins, circulars and lectures. We are also aware of the futility of some of these attempts. The formulation by management and subsequent understanding of a communication by the employee are two different things. Since semantics has become a very active study and students like Korzybski, Wendall Johnson and Stuart Chase are dealing with it in relation to all phases of human endeavor including industry, this is a field in itself. However, Barnard says a "person regards a communication as authoritative when four conditions exist simultaneously: first: when he understands the communication; second: when he believes it to be consistent with the purposes of the organization; third: when it is compatible with his interests as an employee; and four: when he is mentally and physically able to comply with it".

The communication from above has always been the means whereby management controlled production. Employees feel the communication has been too frequently flowing down from above and that there is not enough communication from below. Unions, industrial relations, personnel officers, interviewing techniques, suggestion boxes have enabled the employees to voice their opinions; but the fact that so many means of communication must be used by the employees to reach management shows that there are many problems still present between the

various levels of the supervisory structure. In the Hawthorne experiments, the distrust of the employees towards management on the wage problem was marked. When the investigators revealed this, management realized it was quite different from what they had assumed it to be. Communication upward was deficient. This was considered to be the fault of the immediate supervisors, who had not endeavoured to make management aware of this attitude on the part of the employees.

The supervisor who is not close to his workers will not be able to discover the information of employee attitudes which management wants. This occurred in the test with the 14 men in the Bank Wiring Room. The supervisor who had been accepted in the group and who had good communication with the men was removed to another position. An older man took his place who was disinterested in the group society, and who in turn was isolated from the group social life. When this man would make his rounds of the work room, the men would cease the discussions of their grievances and the supervisor never learned their real attitudes. Naturally this supervisor could not give an accurate report to his superiors. It was only through interviews and from observer comments that management found the operators' attitudes.

On the attitude of the worker to superiors most investigators base their problems of leadership and supervision. They have found that the attitude of the employee towards his job is greatly influenced by his attitude towards his immediate superior: the subordinate is dependent upon the superior for the satisfaction of his needs as a child is emotionally dependent upon his parents. In fact, the whole problem of supervision can be compared to the relations of parents to children. It has been found that many employees react to their superiors as they have reacted to their fathers or mothers in their emotional development; and, as has been observed in psychiatry, many have remained in the dependent role to those in authority while others are in the adolescent resistant stage, with great strivings

for independence and self-realization, sometimes resulting in hostility.

Management is always a threat to the employee's security. The long history of management-labor relations had shown the workers that industry was no respecter of persons, that it had not tolerated human foibles, that it functioned merely for profit, that it released those who did not produce, and that it retained fewer employees when it found that individual production could be increased.

Because of these conditions of threat, students of the field stress certain aspects of the subordinate-superior relationship which must be realized by industry in its selection and training of supervisors: the subordinate must be made to feel secure. He must be able to feel he can be trusted and is accepted by management. This can be developed by informing him what is expected of him in the job assigned to him; where he fits in the organization; that he knows how he measures up to what is expected of him and receives praise when it is due; and, as mentioned before, he should be told of changes to be made before they occur, and why they are made. He must also know that in the matter of discipline certain set punishments will be administered for infraction of the rules, that the punishments will be given as soon as possible after the acts, and that there will be no favoritism.

To fulfill these subordinate needs, the supervisor must obviously be a person with many outstanding, and in these days, unique qualities. Many students of industry and of leader, have listed what in their opinion are cardinal qualities a leader must possess. Dr. Lydia Giberson⁷ gives a detailed list which she admits are "symbols of perfection," and that if anyone had them all, he would be our boss and superior also. She summarizes them in the word "humaneness—the desire to qualify and raise as many others as possible to his own status rather than consider himself constituted as arbitrary ruler of those over whom he has supervision and authority".

VI

HOW to pick supervisors and leaders is a problem still being debated. It is admitted that psychological tests have been of very great help in selecting some types of employees, but no tests have been inclusive enough to select leaders, especially in the higher levels of management.

The desire to lead is not present in everyone. Many become very unhappy when they find themselves in line for promotion. In the armed services this was a common finding. Non-commissioned officers refused commissioned ranks, stating that they were not commissionable material, that they could not stand the responsibility. Lower ranks, such as corporals, would not accept sergeant's stripes for the same reason. They would often add that the pay of their rank, with the extra pay for their specialist qualifications, was as much or more, with less expenses, than they would receive in the higher rank; and they were more comfortable living with their men. Psychiatrists are well aware of this, when they talk of promotional depressions and suicides. Unfortunately industry has not reached this attitude and often considers refusal of promotion as indicating disinterest and lack of ambition.

Another problem in selection is that an outstanding worker may not have the qualifications of leadership which another worker of inferior technical ability may have. The promotion of such an inadequate leader would harm the organization by the loss of his technical skill on the job, the unhappiness of the individual, and the damaging of morale of the subordinates.

A method of selecting leaders was used by Jenkins⁸ while testing American Navy pilots on morale in World War II. He used a technique proposed by Moreno in 1943⁹, but which he called the "Nominating Technique". In Jenkins' study he asked each member of a squadron which had high morale, to choose two mates he liked most to fly with him on a simulated important mission, and two mates he liked least. The mates could be anyone

living or dead, in the squadron or not. The majority of choices "liked most" were for the squadron commander; the next choice was for the second in command. More than half of the least liked were outside the squadron. In another squadron known for its low morale the squadron commander was not chosen once, and the second in command was chosen as "least wanted" by many. The remaining choices of the "least wanted" were all in the squadron, and no individual received a sufficient number of "wanted" votes to warrant his leadership. The absence of leadership was one of the major reasons for this squadron's low morale.

There are further technical aspects to this interesting and valuable work which are not necessary to explain here. Management could do well to study the technique. Observations, which formerly were merely suspicions, could be checked and substantiated. It will be found that the group selects the leader after a careful and critical judgment of all its members. These findings support the policy of promotion from within the ranks and even suggest that the group can aid in selecting the individuals to be promoted. In cases where groups cannot agree on a leader, as in the squadron with low morale, management would have to choose from outside the group. The important point is that though management should continue to choose the leaders, it should not fail to consider possible choices from among the employees.

Roethlisberger considered the third significant problem to be in the "adjustment of the individual to the structure."⁵ Mention was already made of the employee who did not want to leave the work he was doing because he liked it and also because he was attached to a group. He was adjusted to the structure even if in a static relationship. He was oriented to the factory layout, to his place in the work room, to the type of job he was doing, to his relationship with his superior and his inferior; but, most important of all, after his work ability had been scrutinized and evaluated by the group around him, he as a

personality had been scrutinized and evaluated by the group and had been accepted as a member. His morale was high.

Adjustment of the individual to the structure is what management is continually endeavouring to accomplish. By doing this their hope has always been that production and morale will stay high. That condition has not yet been realized. Reasons for lowered production and morale were examined in several studies. One of the most commonly mentioned in relation to modern industry is monotony and boredom. Quoting Roethlisberger on this¹⁰: "There is a popular conception that the worker through minute division of labor and specialization has become increasingly an automaton. It is claimed that the repetitive and semi-repetitive tasks which result from the mechanization of work offer little opportunity for the expression of his skill, initiative and instincts of workmanship. He loses his interest in work, and as a result boredom and monotony ensue. The research offered no evidence in favor of this conception . . . "[monotony] is not inherent in the task, but on temperament and attitude, as well as environment; it varies with the individuals and with the same individual at different times."

Companies therefore are now endeavouring to use personnel selection to choose the worker for the job, giving aptitude tests, and finding interests. They also endeavour to make the worker realize the meaning of his job; where it fits into the production of the whole product; the importance of the worker himself in the chain production. They are allowing rest periods during work hours. In fact, the rest period on the North American continent is now called the "Coffee Hour"—as we all know—and Time Magazine devoted a page to this new habit. The English had long realized the break for tea in morning and afternoon did something to the workers, but it had been thought it was the stimulus of the tea alone that did it.

Absenteeism is another factor which management feels is a maladjustment in the

employee. Many studies have been made of the problem but no satisfactory solution has been formulated which industry as a whole is willing or able to use. Sickness is the largest single cause. Many organizations attempt to have every employee medically checked by their medical staff regularly to prevent illness or to find it early. This still is not successful. As in all modern studies of illness, the emotional illnesses lead the list and physical checks never diagnose or satisfy the emotional needs of a suffering employee. Thirty-five years ago a psychiatrist stated that "the psychoneuroses and emotional attitudes of the employees were responsible for a greater loss in dollars and cents than accidents and contagion."¹¹ With our present knowledge of accident-prone employees we would remove accidents from a separate category and add it to the "emotional attitudes." Even "contagion" is now being looked upon with suspicion as being separate from emotional attitudes.

VII

THE most important disclosure of this review of the highlights of the many investigations into human relations in industry is that informal groups are spread throughout the formal structure and that they appear to be so necessary for morale. These groups are formed to satisfy emotional needs of the individuals; needs which the formal structure cannot satisfy. Yet with some of the emotional needs apparently satisfied, there is a steady number of emotional illnesses and maladjustments. Individuals and groups seem unable to adjust the structure.

A more basic need is wanting. This need is a common value; a value which is outside and beyond the economic and work situation; a value to which all members can adhere.

Until research is extended into this area, and a common value admitted, human relations in industry, as in any other phase of life, will remain in the morass in which it is now wallowing.

¹Munsterberg, H. *Psychology and Industrial Efficiency*. Houghton Mifflin, Boston (1913).

²Roethlisberger, F. J. and Dickson, W. J. *Foreword*. *Management and the Worker*, Harvard Univ. Press (1949).

³Tredgold, R. F. *Human Relations in Modern Industry*, Chap. four. International Univ. Press, N. Y. (1950).

⁴Barnard, C. I. *The Functions of the Executive*. Harvard Univ. Press (1938).

⁵Roethlisberger *ibid.* P. 578.

⁶Roethlisberger *ibid.* P. 572.

⁷Giberson, L. G. *Qualities of a Supervisor*. *Studies in Supervision*, McGill Monograph Series No. 6. McGill Univ. (1945).

⁸Jenkins, J. G. *The Nominating Technique; its uses and limitations*. Paper presented at Eastern Psychological Association (1947) In Blum, *ibid* p. 113.

⁹Moreno, J. L. *Foundations of Sociometry*. *Sociometry Monog.* No. 4 Beacon House, New York (1943).

¹⁰Roethlisberger *ibid?* P. 573.

¹¹Giberson, L. G. *Psychiatry in Industry*. *The Labor Gazette* (Canada) Apr. 1938.

Rule Of Law

Empires may perish and nations wither but human nature endures, and the laws that govern it are everlasting.

HEINRICH PESTALOZZI.