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The role of human factors in industrial relations: an analysis of Jack and Heintz

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Boston University
THE ROLE OF
HUMAN FACTORS IN INDUSTRIAL RELATIONS
AN ANALYSIS OF JACK & HEINTZ

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CHAPTER I

INTRODUCTION

I. PURPOSE OF THIS STUDY

Public Relations is closely associated with human behavior. Our whole life consists of an endless continuity of Public Relations of a wide variety. It may, therefore, be defined as the art of studying, knowing, understanding and influencing people either as individuals or as groups.

This study concerns itself mainly with Human Relations as pertaining to business. "Public Relations in business exists for promotion of harmony among employees, stockholders etc. for the more efficient production of goods, for the satisfaction of human needs, for the continued advancement of the broader purposes of life."¹

Ever since the industrial revolution brought about far reaching changes in human ways of life, the relationships between employers and their employees have commanded a great deal of public interest. Speaking of Industrial Relations, the following three power-elements are involved:

1. Brain-Power, encompassing management, research and engineering
2. Machine-Power as a sum total of modern production efforts and
3. Man-Power consisting of the human beings who set up, maintain and operate the machines.

While the first two elements as mentioned above have been developed to a very high degree of efficiency and perfection, the human factor has long been neglected and overlooked.

"Industry's trend away from regarding the worker in the simple sense of 'economic man' has been an evolutionary process which has seen steady improvement with outstanding gains during the 30's and 40's. Embarking on the 50's, it appears that complete acceptance of the human factor in industry is about at the halfway mark and the time is approaching when industry thinks exclusively in terms of the 'human man'."\(^2\)

Despite this optimistic outlook toward a closer understanding of basic human problems in American industrial relations the consideration of human factors in general is still quite insufficient. For generations industrialists have neglected the "social man" in favor of the "economic man". Labor used to be referred to as a commodity and human needs were interpreted in strictly economic terms to the neglect of other considerations. The industrial executive has tended to regard social legislation affecting his workers as "a tax upon private enterprise". He has been inclined to be suspicious of humanitarian or social thinking, basing too many of his judgments on a narrow interpretation of financial reports.

There are, however, examples of enlightened management in our time where the human factors involved in employer-employee relations have not only been put on an equal footing with considerations of economic and

\(^2\) Philip S. Haring, Professor of Public Relations at Boston University, School of Public Relations
technological nature, but where there has been a consideration of these human factors as dominant prerequisites for a successful and prospering business enterprise.

II. STATEMENT OF THE PROBLEM AND SIGNIFICANCE OF TERMS USED

It is the major hypothesis of this thesis that, when the human factors involved in employer-employee relations are being recognized, understood and respected in the daily operations of the business, everyone concerned will benefit.

In this connection "everyone" means all the publics of a business both internal and external, such as management, employees, stockholders, consumers, government etc.

"Benefit" is to be understood as goals attained, being goals that are held to be in the public interest. For instance, management may legitimately seek to increase the output and to decrease the cost of production; the consumer may ask for goods of better quality at lower prices; stockholders may expect bigger returns for their investment, and employees or labor may legitimately strive for improved working conditions, for personal and economic security and for satisfaction in their jobs.

All the legitimate demands of the various groups listed above comprise the Human Factor which shall be understood as regard for and due consideration of basic human needs, physical, psychological and sociological.
Based upon trustworthy observation as well as on professional surveys and scientific findings, it shall be endeavored

1. to paint a true-to-fact picture of humanism in industry and its effects upon employee morale and productivity as achieved at Jack & Heintz, during the war years 1940 - 1945

2. to describe some of the most important factors relating to group morale and group productivity

3. to examine various democratic ways of communication and collaboration between groups in industry

4. to study socio-psychological methods of how best to measure human factors in industrial relations

5. to correlate certain research findings on productivity, supervision and group morale with the evidence of physical factors obtained in point 1. above.

"Group Morale" involves in itself several human factors. It is not a single entity, but can be broken down into a number of different types of motivation, such as (a) job satisfaction, (b) pride in work group, (c) identification with company, (d) satisfaction with wages, (e) chances for promotion and others.

The significance of this correlation as set forth in point 5. shall be evaluated from a public relations point of view. Finally the chapter dealing with conclusions and recommendations shall point to ways and means of how the findings of this study may serve as a guide towards improved democratic employer-employee relations throughout the nation. Such a goal would have to be achieved through evolution, education and increasing awareness of the social responsibilities of all groups involved.
III. METHODS OF PROCEDURE

1. Printed sources of information on Jack & Heintz served as factual basis for the data relevant to the major hypothesis. As thorough a research as possible was concentrated on two major groups of information as outlined in methods 2. and 3.

2. Production figures, cost of production and other statistical information on Jack & Heintz, together with a brief historical analysis of the development of this company may indicate attainment of goals previously established as legitimate on the part of management.

3. The enlightened personnel policy of Jack & Heintz as described in printed sources of information was critically examined, in order to determine and define:
   (a) the exact kind of respect for and understanding of human factors in employee relations
   (b) the stimulating effect which those forward-looking concepts of dealing with labor as human beings had upon the morale of the employees of Jack & Heintz.

4. Previous scientific surveys on related subjects, conducted by the Institute for Social Relations, University of Michigan, were studied in order to provide useful criteria, principles and standards against which the findings of this study could be compared, analyzed and evaluated.
CHAPTER II

HISTORY OF JACK & HEINTZ, INC.

I. HUMAN RELATIONS FIRST

Shortly before he died, President Roosevelt had the following to say on the importance of Human Relations: "Today we are faced with the pre-eminent fact that if civilization is to survive, we must cultivate the science of Human Relationships - the ability of all peoples at all times to live together and work together, in the same world, at peace."

And President Truman remarked in a speech given in October, 1949: "The challenge of the 20th century is the challenge of Human Relations and not of impersonal natural forces."

In the light of present political events, those words assume increasing importance. Human Relations is the key problem of our troubled times, and, unless we apply the basic principles of human understanding, charity and co-operation to our personal and social relationships from the community level up to and including international affairs, all the diplomatic or military victories in the world will not be able to save our present-day civilizations from total destruction. This rising threat is obvious to many, and a number of spiritual and educational leaders have promoted plans to avert complete tragedy. It seems, however, that the solemn pleas of those few "wise men" are far outnumbered by a group of "modern" men and women who put all their hopes and expectations in
mechanical power-instruments and technical know-how achieved through the rapid progress in science. If it is science that gives us power, who—we may ask—will show us the way and teach us the restraint and wisdom to use this power? Science per se will not do anything for us and our survival.

The struggle today is fought on both ideological and philosophical planes and we are led to believe that the good cause will win out in the end. Most of us are convinced of the superiority of our democratic institutions as a form of government and a way of life. The personal freedoms and human privileges for which our forefathers stood appear to be as much cherished today as they were 175 years ago. Men have to be free if good Human Relations are to prevail. Free men, however, must also accept their social obligations and responsibilities readily, in the interest of the freedom of all individuals. On this basis, it will be relatively easy to obtain the necessary team-work and collaboration without which no common problem can be solved in a truly democratic way.

II. THE PERSONALITIES OF BILL JACK AND RALPH HEINTZ

Before giving a brief description of the personnel policies of Jack & Heintz, Inc. during the war years 1940-1945, it is essential to introduce the two men whose backgrounds, personalities and philosophies of life made the phenomenal success of their firm possible.

Bill Jack. William Saunders Jack was born in 1888 in Cleveland, Ohio. He quit school at 15 and took his first job as an apprentice with the Hussey Drop Forge Co. After three years of apprenticeship he became
a toolmaker in the lamp division of General Electric. He was initiated in 1911 into the International Association of Machinists and, finally, settled, in 1913, in Cleveland as a member of local 83 of that union. In his capacity as business agent of the International Machinists Union he increased its membership from 100 to 3500 within five years.

Although he believed in organization and education towards trade unionism, Bill Jack was opposed to strikes called on the spur of the moment and also to all forms of campaigning against employers. Being a hard worker himself, he was convinced that some ways of understanding between industrial management and organized labor should be found to avoid unnecessary cessation of work.

Bill Jack stood for efficient production methods providing such efficiency was not abused. His main attitude towards labor and its problems was humanitarian. He believed in the concept of humanism in industry, a policy which he has put into successful operation in his plants.

The following quotation from one of his speeches will best reveal Bill Jack's thoughts and ideas on industrial relations:

"I am trying to spread the doctrine of humanism in industry throughout the United States of America....If we are to be successful I must have your support. Anytime there is something wrong I certainly would like to get a letter calling my attention to something that could be approved upon ... I will personally investigate anything that comes up which is to the interest of you and your family. So please, help me! Many forces are not in accord with some of the principles we stand for in industry."  

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Other important character traits of Bill Jack which enabled him to gain and hold a strong influence upon his employees were his absolute honesty and sincerity, his initiative, energy and exceptional power of expression and his fair and equitable treatment of his employees. He showed a deep human understanding of labor and its problems and believed in the democratic form of industrial management. In questions of shop efficiency it was Bill's opinion that this was best attained by giving a great deal of attention to the human factors involved which are apt to bring about group harmony.

Bill Jack's leadership was generally recognized and faithfully accepted. His whole personality inspired friendship and confidence. He did not forget for a moment that he, too, came from the bench, hence his thorough understanding of the thinking and feelings of industrial workers. His employees, according to a report in Business Week of Dec. 26, 1942, achieved a very high record for production.

Ralph Heintz. Ralph Heintz, the inventor and engineer of the team, was born in 1892 in St. Louis, Mo. He studied at the University of California, joined the Army in 1917 where he served in the signal corps and continued his studies after World War I in Stanford from which institution he graduated in 1920.

Working in similar fields and thinking basically along related lines the two men, both at the West Coast at the same time, were likely to meet. They started their first plant in California in 1937. Although this experiment was of short duration, it worked out to the satisfaction of both, and when World War II came with increased government demands for technical products, the two men teamed up again. Together they established the
firm of Jack & Heintz in 1940 where they achieved generally recognized production records.

Heintz's genius solved complicated technical problems, cut production costs and procedures to a minimum and he became known as the man who eats, sleeps and dreams work. At the same time he kept himself in the background as much as possible. He shared with Bill Jack his policy of human understanding towards the employees of the firm and was also known for his honesty and sincerity. Under these prevailing liberal and democratic conditions nobody found anything unusual in the term "associates" used for the workers of Jack & Heintz.

"The 'associates' of 'Jahco' (Jack & Heintz Company) respect Ralph Heintz. They almost worship Bill Jack. Heintz dreams up designs for war instruments, and Bill Jack gets them into production by guiding his men and machines. Jack, a brilliant production man, is a genius at getting people to work with him and for him."

The following lines written by Ralph Heintz are significant of the Jahco spirit and shed a light upon the enthusiasm for work generally prevailing at Jack & Heintz: "As with an army which looks to its general for driving force, judgment and understanding, we look upon our president Bill Jack, for it is his figure and dynamic personality and his ability for hard work and clear thinking that set such a perfect example for those working with him." Significant, also, for the Jahco spirit is the motto of the company: "Labor and Management Associates in Progress through Co-operation".

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III. "Jahco" FROM 1940 TO 1945

Jack and Heintz was organized in November, 1940. Four years later, Fortune Magazine reported that "The 'Jahco' Way with its Employee 'Associates' had already become legendary. No other U. S. war production miracle has excited people more than the performance of this Cleveland, Ohio manufacturer of airplane starters, automatic pilots and other flight instruments. Jack & Heintz achieved a high-ranking production record which, it can be assumed, is due to their unique personnel policy. Jahco handled its employees as employees were never handled before. Here are just two of the many benefits given to Jahco employees or "associates":

1. Each "associate" is given free 1 to 2 pairs of specially fitted working shoes, 2 uniforms, health facilities etc.

2. "Associates" after six months with Jahco are entitled to free vacations with pay (plus $50.00 spending money) on the company's wooded Harbor Island in Canada or on tropical Honeymoon Island off the west coast of Florida.

From their start in 1940 with 25 men who had to work in a grimy, leaky, rat-infested shop, with little light, less heat and under very poor hygienic conditions Jack and Heintz, whose partnership contract was simply a handshake, developed their enterprise to such an extent that after 4 years Jahco owned $4 million worth of plant equipment, six factories, most of them new, and boasted 7,500 "associates". Sales for the fiscal year ending October 31, 1942 were $23 million. For the same period in 1943 sales had climbed to $100 million.

When Jack & Heintz, Inc. was chartered in Cleveland in 1940 the initial capital was $100,000. The entire sum was supplied by Bill Jack
who, in turn, lent $25,000 each to his sons Clarence and Russ and to Ralph Heintz with which to buy a quarter each of the interest. Heintz has since paid off his share.

Jack and Heintz were production geniuses. While Ralph Heintz designed a new airplane starter so as not to infringe on patent rights held by the Eclipse Pioneer Division of the Bendix Aviation Corp., Bill Jack tooled up the plant with the necessary machines and also organized mass production. About 90 per cent of all manufacturing operations were made automatic or semi-automatic. This allowed them to use unskilled or semi-skilled men or girls on jobs heretofore requiring highly skilled hand-workers. The partners were constantly striving not only to outdo their rivals but to outdo themselves.

As an example of how production costs were cut down at Jack & Heintz, we just mention their automatic pilots which, in the middle of 1942 were priced at $4,500 each. None, however, was ever billed to the government at more than $2,900. By July, 1943 the price was down to $1,870 which was below the competitors' quotation of $2,200. It was generally agreed among Cleveland business-men that the astoundingly low prices and production costs of Jack & Heintz were due mainly to three factors:

1. Better engineering
2. Better shop practice and enlightened labor relations
3. Willingness to work for smaller profits.

But Bill Jack's labor relations techniques became the most famous factor of all and his most important contribution to the art of industrial management.
The labor relations methods of Jack & Heintz will be discussed in detail in the following chapter. To get an over-all idea, however, how much money was spent each year on benefits and special privileges to workers, some of the guiding principles, as outlined in an article in Public Opinion Quarterly, shall be listed as follows:

1. Sincere recognition by the management of the importance of the individual man
2. No piece-work
3. Free coffee at any time
4. Absolute fairness in the handling of grievances and promotions
5. Security through liberal pay, free life-insurance policies and loans to employees
6. Protection of the workers' time and pay through
   (a) free dental care in the plant
   (b) immediate care for colds through vitamins, steam baths, massages, diathermy and chiropractic treatments
7. A bonus of $50.00 a month to each "associate"

In 1943, the company spent $121 a month for benefits including vacation, lunch etc. for each "associate". Figuring an average of 6,000 "associates", it must have disbursed more than $3,500.00 worth of benefits for one year. In addition, the employees received a premium of about $2,500,000 for overtime, since at Jack & Heintz 2 shifts only of 12 hours each were used instead of 3 shifts of 8 hours. This brought the total for benefits and overtime up to about $11 million in 1943, or 10 per cent of gross revenues, or 17 per cent of costs. The fact, however, is that this system produced happy workers.

Another fact was that Jack & Heintz, Inc. was able to compete successfully with other companies whose employee-benefit system did not
include 42 hours a week overtime, steam baths, free vitamins and all the other amenities of the Jahco way of life.

Despite this huge financial outlay for employee-benefits the company was able to offer progressive reductions in selling prices every six months. Even though, in 1943 alone, aggregate reductions in original contract prices amounted to $55 million, the sales for that year topped all previous figures and reached a high of $103 million.

The following facts and figures as published in an article in the June, 1943 issue of "Industrial Marketing" are as accurate as could be obtained. There, in a speech before the Atlantic Regional Conference of the National Industrial Advertising Association in New York, Bill Jack revealed anew the philosophy behind his labor relations program which had resulted in such great production achievements. He tried to prove through statistical data that the phenomenal business which he has built upon his creed of "Humanism in Industry" is being operated with greater efficiency than that of any other plant in the country. He told the assembly that Jack & Heintz employed over 7000 men and women in their six plants, that its workers are 100 per cent unionized (A. F. of L. International Association of Machinists) and that, by their own free choice, they work 12 hours a day seven days a week. The workers are paid on a merit system with a minimum and maximum hourly rate, the wage received depending entirely upon the recommendation of the supervisor in charge of the particular department. A few operating figures for the year 1942 and the beginning of 1943 follow:

This fiscal year ending October 31, 1942 showed a total business volume of $19 million. Profits before taxes amounted to approximately
$3 million, out of which approximately $6 million were paid to the government. $1,500,000 were set up for a post-war adjustment fund and a sum of $500,000 was set up for repairs and replacements and also for a school for the free education of Army and Navy men who came into the plant to learn about the equipment being made.

In the first quarter of the new fiscal year - November, December 1942 and January 1943 - the company did more business than in the entire preceding year. Furthermore, in the month of March, 1943 sales were $11,500,000 which was more than half of the sales figure of the entire preceding year, with a profit of nearly as much as was made in the first quarter. Despite this record of profit the company's prices were anywhere from ten to forty per cent lower than those of its competitors.

By the end of 1943, Jahco employees had received a Christmas bonus totalling more than $2 million as compared with $1,550,000 paid in 1942. The peak was reached in 1944 when a total amount of $5 to $6.5 million was paid in bonuses to 8800 "associates".

Looking towards the future welfare of the "associates" the company set up its post-war reserve so as to guarantee that all who wished might work at least 40 hours a week, until such a time as a regular income would be derived from peace-time production.
CHAPTER III
WHAT MADE JACK & HEINTZ FAMOUS

I. DEMOCRACY IN BUSINESS

A. Enlightened Management

Jack & Heintz, Inc. represents a far greater contribution to forward-looking concepts of personnel work than has been generally realized. Their plans to build a manufacturing organization for the quantity production of precision mechanisms involved a three-fold goal:

1. a stable long-term competitive position
2. adequate earning power
3. sound reputation for good work, fair prices to customers, and fair and equitable treatment of its employees.

It does not take a social reformer to work out objectives like this which are acceptable alike to capital, management, labor and the consumer public.

In a rare understanding of the company's human and technical needs Jack & Heintz developed a policy which contained the following unique features:

1. Understanding and objective attitude toward the human problems and social obligations of industry
2. Effective utilization of man-power
3. Objective and honest decisions applied to the study of the human factors in industry
4. Improvement of earning power, long-term competitive position, price policy etc. through improvement in man-power methods.
An article in the "Iron Age" of April 6, 1944 attributed the success in achieving record breaking production records at Jack & Heintz to the humanism that prevailed between management and employees. Bill Jack, who had started from the bench and had been a business agent of the machinists' union, understood the workers' psychology and attitudes. He tried to make every worker feel that he was a partner in the business. On this score his two principal objectives were to eliminate fear and to take care of the human body.

Stating that he had no quarrel with efficiency and time study men, Mr. Jack expressed the belief that the greatest curse of production is the fear which prevails in many plants that a piece rate will be cut. As a result of this belief there developed a bond of understanding between workers as to what they could reasonably produce without being cut. In the Jack & Heintz plants, on the other hand, straight time was paid and formal incentives were lacking. A much more potent incentive, however, was developed and maintained: work pride and a high "esprit de corps".

Bill Jack's belief in democratic methods in industry is expressed in his following words: "The voice of labor is not a threat to private enterprise. Private Enterprise should realize that democracy cannot be left behind at the factory gates. Good citizens in a political democracy cannot spend 8 hours a day in an industrial autocracy".

Within the realm of democratic industrial relations the best results for the benefit of all will be obtained where an over-all understanding exists between management and labor, supported by mutual respect and confidence.
B. A Philosophy of Human Understanding

Jack & Heintz personnel policies have developed out of the life experience of Bill Jack and Ralph Heintz and out of their vision of a more humane approach to industrial organization. They must be considered pioneers in trying to weld together the best in capitalistic private enterprise and the best in collective democratic self-determination. It was the policy of Jack & Heintz to cultivate in their plants a form of open-minded and objective thinking which did not condemn any idea because of its sponsors or its extreme implications. Ideas were selected out of human experience with no other guide than their value in regards to the interest of labor, management and the consumer.

The thorough understanding on the part of Bill Jack of his workers and their needs expressed itself in his every word and action. He inspired confidence and had natural leadership. To an observer of the enthusiasm displayed by all "associates" from the top down to the ranks it was not easy to distinguish whether the cause was to be found in the fervid spirit prevailing in the Jahco plants or in the fanatical loyalty to Bill. Whenever Bill expressed his ideas or explained his plans over the address system through informal talks to his "associates" he almost always "hit the spot" and ignited the spark of enthusiasm in his listeners.

In one of his addresses he said:

"The country as a whole has a big job ahead. In order to achieve victory we must have harmony in the industrial plants of this country. If management will only take into mind how they are going to inject an 'ism' behind the word 'human' any man in the U. S. A. can get exactly what we get at Jack & Heintz, and that is a 100 per cent co-operation from each and every 'associate'"
in our organization. Our motto is 'Labor and Management Associates in Profit through Co-operation'. The man who is sweeping the floor or the man who is oiling the machinery or firing the boiler is just as important in this organization as my associate Ralph Heintz, who is one of my partners, and myself."

This philosophy of social understanding coincides perfectly with the concept of Public Relations as expressed by F. T. LeBart5:

"Public Relations is the development and application of principles, methods and techniques to the individuals or groups who comprise, influence or are influenced by a given organization, so as to build or maintain the human relationships requisite to co-operation, understanding and progress of society."

C. Special Emphasis on 2-way Communication

Getting information to flow freely through convenient channels in both directions between the working men and their management is one of the basic principles of sound Public Relations in business or industry. It endeavors to promote co-operation among or with the various publics of an industrial organization.

Bill Jack was famous for his inter-plant public address system which he used to keep in constant and direct contact with his employees and which became a significant part of the whole Jahco philosophy. There were musical selections devised to ease the strain of the job and church services on Sundays. The principal idea, however, was to keep the "associates" informed, and Bill Jack saw to it that this part of his duties was faithfully fulfilled to an extent hitherto unknown in industrial relations. The microphone on Bill Jack's desk became a symbol of this

5 F. T. LeBart, op.cit.
new democratic spirit in industry, a constant reminder that executive offices and management policies are no longer remote from the concern of those who do the physical work.

Bill Jack who was on the job from 14 to 20 hours a day took a personal interest in sharing his thoughts with his "associates". Twice a month he talked regularly over his public address system to the workers on each shift in each plant. That means that 12 times a month he was in the plant at 3:30 a.m. talking to the men of the night-shift. He was convinced of his obligations and his social responsibility to keep the workers in the plants constantly informed of the progress and problems of the company. But it was equally important to him to report to them on his own activities, this in the interest of achieving as full harmony as possible between management and labor. From wherever he was he never once forgot to put long distance calls through in order to inform his workers of the day and night shifts of his activities. These addresses were characterized by their warmth and sincerity; his words were always personal, stimulating, encouraging and understanding.

This outspoken policy by management served not only to propel production, but it prevented gossip and rumor from spreading. Every new measure or change as well as the reason for same were first thoroughly explained over the P.A. system and then discussed among all workers, so that generally complete unanimity was achieved when those objectives were put into effect. The following passage of one of Bill Jack's addresses over the inter-plant broadcasting system in plain down-to-earth language, easily to be understood by each of his workers, may serve to illustrate
the influence of those speeches upon employee morale and productivity:

"I ask you to encourage any man in any department who may be qualified for something better. The company will need leaders. They have to be drawn from our own people. Keep up the Jahco spirit! The associates must keep it alive, initiating new ideas to improve the quality of Jahco products and the morale of Jahco at all times. - One for all and all for one. - Every associate of Jahco is on my mind day and night at all times, because this is the first thing we want: to build an industrial democracy that we hope will become a blueprint for all industries of the United States to follow. You are a part of creating that blueprint and your actions will guide your future."

This casual way of spreading enthusiasm and knowledge of facts was also observed by the major and minor executives of the company who became used to talking to their men about anything and anybody. This method improved working relations in three ways:

1. Intellectual satisfaction among workers of knowing what is going on.

2. Social satisfaction of knowing about the boss and the men around him.

3. Co-operation between departments who have read or heard about each other. Elimination of the feeling of strangeness which exists in many other large organizations.

Another medium of information was the Jahco News which reflected faithfully the viewpoint of the employees. Material representing management's views was given limited space only. Thus the Jahco News constituted a refreshing relief from paternalistic house organs found in other organizations.

But labor's voice had also to be heard. In order to give the workers a chance to air their wishes and complaints, their suggestions and grievances, their job problems and personal troubles Jack & Heintz devised a unique system.
From the beginning Bill Jack felt that an employer should have time to circulate among his employees and assist them in dealing with personal problems. Later on, when it became physically impossible for him to do this—something which he considered a normal function of an employer—, he carefully selected men and women to act as his "Good Will Ambassadors". It was their job to walk through the shops and to talk informally with the workers. There was no formal system of case records. Counseling was largely verbal and the reports to management concerned individual problems. The Good Will Ambassadors employed by Jack & Heintz were exceptionally well qualified in practical occupational experience and in practical experience in dealing with personal problems. They were chosen by Bill Jack, a selection based solely upon his unusually keen perception of human values.

Bill Jack instructed his counselors to listen patiently to everybody's trouble or complaint regardless of how small or insignificant it might appear. To use Bill's own words: "No matter how small the problem is, at the moment it is the biggest thing in the employee's life. People who are troubled seem to feel much better if they can discuss their problems with someone in whom they have confidence." In practice, this system used to work like this: a Good Will Ambassador would walk through the shops and if any of the "associates" had a problem he would call the counselor over. Once the counselor had gained the worker's confidence, the latter would feel very glad to talk freely and to get straightened out his or her particular problem.

Finally there were the so-called Roving-Mike Meetings which were held monthly in each of the plants for day and night shifts. Those meetings,
which all associates had to attend, were usually held in the plant cafeteria. Five or six mikes were carried around by "rovers" who handed them to all associates who had grievances. Before the associates got the floor, however, Bill would speak through his own mike assuring his workers that the meetings were man to man affairs and that each one could speak without fear of reprisal. Then for about two hours, during which time all work stopped, the workers presented their problems. Jack would listen patiently, answer all questions he could handle and promise investigation into the more complicated grievances. Usually another speech would wind up those meetings.

II. PERSONNEL POLICIES THAT MADE HISTORY

The most detailed description of the Personnel Methods used by Jack & Heintz during the war years 1940 to 1945 was found in R. H. Ward's "Personnel Program of Jack & Heintz" (Harper & Bros., New York 1945). According to this source of information the personnel principles and techniques as applied by Jack & Heintz can be broken down as follows:

1. Factors that made for elimination of the traditional causes of the gulf between management and labor.

2. New methods of labor-management collaboration.

3. Development of a strongly motivated will to work.

A special sub-chapter will be devoted to the measures taken in the interest of the worker's economic, physical and personal security.
A. Elimination of the traditional Causes of the Gulf between Management and Labor

Jack & Heintz's personnel methods were liberal and democratic. Their main principles included the following concepts:

1. Management and Labor have the same objectives in developing a manufacturing organization. They can fairly divide among themselves the benefits accruing from such a development.

2. There should be absolute honesty and sincerity on the part of management in working towards mutually understood objectives.

3. Management should be free to make final decisions, not dominated by absentee capital or banking interest.

4. Management ought to understand Labor especially where the keymen themselves had shop experience.

5. Management should fully support union agreements.

Bill Jack recognized that an effective implementation of the doctrine of identity of economic interest between management and labor involves

1. an equalizing of the rewards of productive work and

2. a mutual sharing of the risks.

He realized also that it was up to management to take the initiative. Jack and Heintz decided at the beginning, therefore, that management should share higher profits with the workers. According to their theory management and labor are living in the same economic, social and cultural world, and they can both constructively utilize more money when they can get it. It is known that Jack & Heintz have always paid high wages whenever possible and, consequently, cut turnover and absenteeism to a minimum. Bill Jack believed that the worker could be trusted with more income. He was able to prove his point when large amounts of the employees' income continued to flow into investments in war bonds, company preferred stock, property ownership and savings.
It is more than just interesting that this philosophy of Bill Jack in regard to his employees constitutes an almost radical departure from traditional industrial thinking and forms the real basis of all other policies of Jack & Heintz.

The honesty and sincerity which were outstanding characteristics of Bill's personality were also expected from the other executives. Jack's workers knew that Bill did not just talk. His statements of policy were immediately converted into action. Bill's straightforwardness cast its reflection upon his associates who displayed the same sincerity and willingness in carrying out new policies of benefit to all. As one of his "associates" put it: "At first it was hard to believe; we were skeptical. But now we know that Bill means what he says. He will never let us down."

Bill Jack does not see any necessity of a conflict between management and labor concerning unionization. On the contrary, he is convinced that a union is a normal part of an industrial set-up.

B. New Methods of Labor Management Collaboration

The principles and techniques used by Jack & Heintz in management-labor collaboration were remarkable and trail-blazing. Some of the most important of those principles are listed below:

1. Skilled workers are intelligent people. They must know all about the organization and about their jobs. One for all and all for one became a Jack & Heintz slogan which was generally observed. The employees were made to feel that they were working for their own benefit and owned a share in the company; hence the justification for Bill's calling them his "Associates."
2. Management that lives in a goldfish bowl gives its workers the opportunity to know their executives well, to understand their attitudes and to co-operate with company policies.

3. Every phase of Jack & Heintz's activities was carefully explained to all "associates".

4. There were no petty regulations, no petty authority. Minor disciplinary problems such as tardiness etc. were ably handled by the employees themselves.

5. Management should be able to foresee possible causes of misunderstanding, discomfort or distress.

As Bill Jack saw it, industrial workers nowadays are operating at a higher level of intelligence than in the past. Along with this development there has been something of a renaissance in the democratic thinking of industrial workers. The increasingly articulated voice of labor cannot be regarded as just a result of "agitation", of labor legislation or of left-wing propaganda. It is rather an evolutionary result of the best in American Democracy.

Jack did not tolerate petty authority, petty regulations or petty restrictions. He considered them wasteful and foresaw labor troubles wherever old-fashioned disciplinary methods were used.

On the other hand he tried to forestall possible labor troubles long before they had a chance to arise. His sincere recognition of management's social responsibility toward its workers and their well-being kept him on the constant alert to foresee and prevent the development of possible causes of misunderstanding or distress on the part of his associates.

The rather unusual generosity of Jack & Heintz, Inc. towards its employees produced extraordinary results but, at the same time, aroused
suspicion and controversy among other manufacturing concerns in northern Ohio. The latter had to admit, however, that Jack's personnel methods did get results in terms of production and profits.

There was no magic to Jack & Heintz's sensational success. Bill Jack's personality plus Ralph Heintz's inventive genius did the trick. In order to get every possible ounce of work out of everyone of his associates Jack convinced each worker that his own welfare and the welfare of his company were intertwined. He paid high wages but was able to collect high work-dividends. On the basis of hourly wages, Jahco workers were in the top bracket but not at the extreme top of wage levels among aircraft parts makers in the Cleveland-Toledo-Detroit industrial area. At one dollar an hour they would earn a hundred dollars for an eighty hour week which is forty hours straight and forty hours time and a half.

Jack did so much for his associates- among other projects he built for them a recreation center with bowling alleys and refreshment stands which belonged to the employees and not to the company - that their work enthusiasm knew practically no limits. Where other factory workers usually produced at a rate of about 75 per cent of their full capacity Jahco workers, with their spirit and morale generated by Jack and Heintz, could easily boost their output to the rare figure of close to 100 per cent.

C. Development of a strongly Motivated Will to work

There is hardly a man who, by his own shop experience, knew more about workers' attitudes, aspirations and satisfactions than did Bill Jack. He was pretty well aware of the workers' own evaluation of the factors
relating to their jobs, and he did not disregard the importance of motivating factors leading to increased job-satisfaction, intensive group pride and higher production.

In this connection the following motivating elements are of interest to anyone concerned with strictly human factors in industrial relations and their effect upon higher productivity:

1. Development of a feeling by the "associates" that they were working for themselves.

2. Feeling of pride in achievements which they themselves have made possible.

3. Recognition by "associates" that they were pioneering in a new kind of industrial organization.

4. Feeling among "associates" that nothing was routine and the desire on their part to look forward to more interesting innovations.

5. Stimulation from constant improvement of physical surroundings.

Beside the fact that Jahco employees had bought and owned a total of $15,000,000 of preferred stock of the company, there prevailed the distinct feeling among them that they were actually working for themselves. This feeling was fostered through Bill Jack's personnel policy which centered its attention around those human factors in industry which make for more understanding, satisfaction and co-operation.

His "associates" were given the opportunity to participate intelligently in the problems of management which were close to them socially and economically. They took a distinctive pride in the craftsmanship at Jack & Heintz which worked two ways:

1. Any new design or technological invention improved the working process as such and created better products.
2. it stimulated the interest of the associates and their spirit of cooperation to such an extent that they happily added their best efforts in the interest of a common cause.

The result was: high quality goods, accuracy in maintaining delivery schedules and efficient workers who were proud of their working group and contented with their jobs. No better morale-building factor could have been devised than these ingenious and well-thought-out overall personnel methods as used by Jack & Heintz. Their constant stimulation of interest, alertness and constructive changes, their frequent technical innovations and improvement of physical surroundings and the complete lack of monotony of any kind had the effect of being most powerful generators of human values in the hearts and minds of Jahco employees; this, in turn, found its outward expression in high group morale and high group productivity.

III. WORKERS' SECURITY - A MAJOR OBJECTIVE

There are too many examples of cases where, by and large, industrial employees do not cooperate wholeheartedly in the economic purposes of the firms they are working for, nor do they seem to be conspicuously happy. This is despite the fact that the personal relations between the executives and their employees may be cordial and kind, proving that there exist certain personal preoccupations and group anxieties which influence the behaviour and attitudes of employees in such a manner as to increase the difficulty of organizing industrial processes to meet their economic purpose. Management may believe in the value of social integration and try to create a loyalty on part of the workers to such abstractions as "company policy", "a big happy family", "the principles for which we stand", and others. But
what do they get? They will find that employees do organize in groups and that they do develop a sense of group collaboration. But this development, somewhat in opposition to management's intentions, follows other principles. It organizes itself along the following lines:

1. The worker's need for personal security,
2. Perpetuance of his competence within the group,
3. Perpetuance of the working group as such,
4. Concern for his immediate social life during working hours and
5. Strong concern for his economic future.

In recognition of these rather basic human and social needs, Bill Jack, the humanitarian, provided the following measures for the development of the security of his "associates":

1. Economic security
2. Physical security
3. Personal security

A. Economic Security

The pay levels at Jack & Heintz were always kept as high as possible consistent with government regulations and price policies. Jahco workers, in general, were not paid top-level wages, but their take-home pay reached record heights due to the large amount of overtime pay received for 12 hours a day, 7 days a week work. This policy had sensational results. It raised the volume of production to nearly full capacity - a performance rarely attained in other industrial organizations - which enabled the company to keep lowering their contract prices. This lowering of production costs
can clearly be traced to two factors:

1. a strictly human one which was stimulation of production, team-play between shop and management, co-operation of the associates and

2. a mixed human-technical one which caused consistently fine craftsmanship.

Profits made by Jack & Heintz were, therefore, due to lower costs rather than to higher prices. This was achieved through original personnel methods the costs of which may appear as luxurious to some but will definitely be considered as essential and legitimate by others in view of the high goals attained.

Other benefits of economic nature enjoyed by the workers of Jack & Heintz were:

1. a company-paid life-insurance and health-insurance policy for each "associate"

2. constant encouragement of the "associates" to try to better themselves and to increase their earning power through promotion to work at higher skills

3. ample credit facilities through establishment of a credit union

4. assistance in other phases of personal finances worked out by Bill Jack's "Good Will Ambassadors". The services rendered were prompt, and each case was handled by experienced staff personnel in an understanding and personal way.

Finally it should be mentioned as a perfect example of management-labor collaboration that $15,000,000 worth of class A stock (preferred stock) was issued and sold to associates, an investment specially earmarked for future use in reconversion for peace-time production.
B. Physical Security

From the beginning it was clear to Bill Jack that special preventive and therapeutical medical care had to be given to his workers if they were to withstand successfully the strains and pressures of an 84 hour work week. It is true that this arduous working schedule was imposed upon them by their own choice and free will and that they liked it too (the percentage of labor turnover was negligible), but their physical ability to work had to be safeguarded in their own interests as well as for the benefit of the company and its customers.

Jack and Heintz were, therefore, determined to make a broad approach to maintaining the physical health of their associates. They devised a long-term, well-balanced health program which was completely company financed and went far beyond any health service ever in use at any industrial organization.

To prevent fatigue, bodily strain, weaknesses, fears and uncertainties concerning health from raising havoc with the physical condition of the workers a central medical center was erected by the company, with dispensaries in the various plants. The associates had to undergo periodical physical examinations including X-ray tests. The company had a hospitalization plan and - as a comparatively new and rare service to be offered in manufacturing plants - a plan for dental care. This plan did not interfere, however, with private dentistry, since all cases except emergency and preventive work were referred to the associates' regular dentists.

It is said that Jack & Heintz, Inc. was the first industrial organization in this country to make available physiotherapeutical service to all its employees. This treatment was given - immediately and on the
spot - in all clearly defined cases of muscular, organic and nervous ailments in much the same way as in the conditioning of college athletes or of other professional athletes. Steam baths, massages, thermal treatments etc., provided by licensed practitioners, were successfully administered to avert fatigue and often, also, to fight off common colds.

There was one measure in particular which created much discussion and opposition in industrial management circles. At Jack & Heintz arrangements were made with the employees by which they were permitted to seek relaxation at their own point of fatigue. There were no standard "rest-periods". The individual worker determined for himself his point of fatigue and governed his rest-period accordingly - a sensational and revolutionary innovation in an industrial organization of over 7000 employees. It worked fine at Jack & Heintz. The associates respected the privilege and used their own disciplinary methods to correct singular cases of abuse. They became so accustomed to use self-discipline in their own social relationships while at work that the management did not hesitate to grant them another privilege which must be considered quite unique. In recognition of the human and legitimate need for an occasional snack, smoke or conversation with fellow employees as a part of a normal working-routine the associates were able to obtain at any time coffee, tea, hot chocolate or bouillon free of charge. This measure helped to prevent fatigue and provided for a minimum interruption of working schedules.

To help prevent industrial fatigue for workers who have to stand on their feet for long periods of time the company provided two pairs of specially fitted shoes for each worker.
Free lunch was served in company cafeterias which offered relaxation in pleasant surroundings. Proper care was taken to serve good food and enough of it, in conformity with the standards of a well-balanced diet. The cafeteria was within the gates of the company's plants. The associates who did not have to leave company territory agreed, therefore, to cut their lunch-time to half an hour whereby more working time was gained. At the same time, the temptation to indulge in intoxicating beverages during working hours which is known to be a frequent cause of absenteeism and industrial accidents, was eliminated, since none of those beverages was sold on company territory.

Another important benefit-measure, carefully observed by everybody, was the company's vacation plan, an essential feature for employee morale and productivity. Based upon the experience that longer working hours and harder work necessitates a greater degree of health protection through a period of continuous absence from the normal place of employment, the company insisted that vacations be actually taken. Jack & Heintz gave its employees not only a paid vacation, but reimbursement for transportation and subsistence expenses on top of it. Experience has also shown that double pay instead of vacation does not produce good results. Full and actual vacation at company expense became, therefore, a very definite factor in successful and productive operation rather than merely a bonus or a subsidized luxury.
C. Personal Security

In order to develop a feeling of personal security on part of the workers in an industrial plant, it is absolutely necessary to keep the channels of information open and easily accessible for each one of them. A successful step in this direction was the "open door" policy on part of management as exercised by Jack & Heintz. It served for the discussion of grievances and other labor problems, and it helped the associates to gain access to the top authority without having to "go through channels". It was a policy of fair treatment recognized and respected by the associates. It was possible for each one of them to take his problem direct to Bill Jack without consulting anyone else. As Bill put it: "We get together and talk it out".

In general, there were very few causes for complaints or grievances at Jack & Heintz. In case of grievances, however, which could occur for reasons of changes in classification, upgrading, increase in pay, transfer etc., the following steps could be taken:

1. The associate could take his grievance up with his foreman. As a rule the majority of grievances could be cleared up by this step.

2. The matter could be taken up with the "committee men". (There is one committee man elected by each department.)

3. The grievance was carried to the shop steward who, in turn, discussed it with the foreman or manager of the plant. Statistics proved that less than one half of one per cent of all cases ever go beyond the state of a conference with the foreman, possibly because of labor politics involved or for other reasons.

4. The case could come up before a shop grievance committee. This is a body of five elected by the union members in each plant. It acts as a jury, hears everybody and arrives at a decision by ballot. It
is noticeable that during a period of ten months, only six cases ever came before the shop grievance committee in a plant of 1600.

5. As a last resort, the associate was always free to appeal to the executive board of his local union or he could still go higher. If his case was sufficiently supported it then became a matter of routine handling between official representatives of the union and of management. No such cases have ever arisen at Jack & Heintz.

Another very effective and successful way of airing grievances and complaints, of discussing personal problems of any kind, of getting advice and assistance or both, in short of helping satisfy the worker's need for personal security, was the previously mentioned unique Jack & Heintz institution of the "Good Will Ambassadors". Their purpose and activities and the details of the counseling program were described before in chapter II, div. C.

Last, but not least, among the factors which played a decisive role in the development of personal security among the associates of Jack & Heintz were the following:

1. A certain vocational security. Jahco products and Jahco craftsmanship carried high prestige, and the associates were proud to identify themselves with them. The associates were constantly encouraged to upgrade themselves - a factor which worked in favor of their vocational security.

2. There were strong morale and emotional ties connecting each associate with the company. Giving his best at all times and enjoying the understanding treatment and almost personal attention of management, the Jahco employee was fully aware of his own importance in the organization and his contribution to the company's progress. This satisfaction, together with the economic measures taken to help secure his future, strengthened the worker's feeling of personal security within the company.

3. Finally, the suggestion-system at Jack & Heintz has always been very successful. It was active, fast-moving, widely supported and willingly accepted.
It has been said before that in our age of a highly developed technical civilization the regard for human needs and human satisfactions has been greatly neglected. Billions have been spent on research in the physical sciences and in their applications. But when it comes to the scientific grasp of the human problems involved in the numerous social relationships of our modern society, the real knowledge of facts is still very small.

Much has been done, however, during the last few years to promote the investigation of our industrial society, to diagnose correctly its ills and weaknesses and to establish a valid set of standards and principles in the fields of human behavior and social attitudes. Among the leading institutions striving for the development of social science and the study of human relations are The Survey Research Center and its associate organization, the Research Center for Group Dynamics, both divisions of the Institute for Social Research of the University of Michigan. In this study we are mainly interested in those objectives of the Institute which deal with studies of Human Relations and Social Organization.

This program of the Research Center was begun under a research grant from the Office of Naval Research in May, 1947. It was proposed as "A Program of Research on the Fundamental Problems of Organizing Human Behavior" with the general objective of discovering "the underlying principles applicable to the problems of organizing and managing human
activity. Some of those research projects which were directed toward
the common goal of investigating determinants of organizational effective-
ness and employee satisfactions shall be briefly discussed in the following
paragraphs of this chapter in the light of their importance and significance
to the main topic of this study.

A. Work Satisfaction in Industry

The objective of this study undertaken by F. C. Mann and D. C. Pelz was to discover factors related to differences in employee morale in a large
public utility whose employees worked at a wide range of occupations under
many different types of working conditions.

Morale, in this case, comprises the employee's satisfactions and
dissatisfactions with their work situation in general and, specifically
the employee's attitudes toward

a. the kind of work he is doing
b. his wages and promotional opportunities
c. his hours and working conditions
d. his supervision
e. his fellow employees
f. the practices and policies of the company.

At first, a measure for employee morale was developed, and then factors
had to be obtained and related to this measure of morale. Both goals

6 Floyd C. Mann and Donald C. Pelz, A Comparison of High and Low
Morale Work Groups (Survey Research Center, University of Michigan)
were accomplished with the help of extensive fixed alternative questionnaires and from intensive interviews. Uniformly high and uniformly low morale groups were then selected for further intensive study. Personal interviews were held with employees and supervisors on job and group morale, and finally an average morale score was computed for each work group.

An analysis was made of differences between employees in high and low morale groups with regard to such background factors as type of work in general, size of work groups, salary etc.

The major differences in the attitudes of employees in High and Low Morale groups centered around supervision with special attention towards the supervisor, regardless of type of work or of group size.

A few examples of what employees considered good or poor supervision and how they reacted in both types of groups are listed below:

<table>
<thead>
<tr>
<th>H. M. Group</th>
<th>L. M. Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supervisor will go to bat for me or stand up for me</td>
<td>87%</td>
</tr>
<tr>
<td>Supervisor is reasonable in what he expects from me</td>
<td>91%</td>
</tr>
<tr>
<td>Supervisor takes a personal interest and understands my problem well</td>
<td>21%</td>
</tr>
</tbody>
</table>

A good supervisor, in the eyes of the employees, should be friendly, fair and democratic (which term may include: consulting of men's opinion, having an open mind for suggestions, discussing matters with employees where they share in making decisions, acting like one of the men and putting himself on their level). The better supervisor was also described as doing a number of things which resulted in giving his employees greater assurance with respect to their work.
B. Supervision, Morale and Productivity

Another study of great interest in this field was made by Dr. Nathan Maccoby and Dr. Daniel Katz. This research project concerned itself with Group Productivity among clerical workers in the home office of an insurance company. Not unlike the findings of the foregoing research study, most of the factors distinguishing between higher and lower producing work groups relate to some aspects of supervision. The various grades of supervision itself and the way in which it was administered - it was found - seemed to play an important role in obtaining the desired group morale. In this respect the function between supervision and productivity can be broken down as follows:

1. Careful detailed supervision seems not to be effective in terms of obtaining results.

2. Supervisors who emphasize production achieve lower productivity than do supervisors who are employee-centered.

3. First-line supervisors of high production groups spend more of their time in supervision and less in straight production work. They encourage discussion and employee participation. In questions of promotion they usually stay out of the process and let the higher-level supervisors handle the job. Their recommendations, however, carry weight and prestige.

4. It was found that employees in high producing work groups were more critical of the company placement policy and the efficiency rating method employed than were those in low producing work groups. Dr. Maccoby suggests that, based on the findings of his study, a method be developed for discovering which personnel policies need re-examination.

Dr. Nathan Maccoby, Research Findings on Productivity, Supervision and Morale (Institute for Social Research, University of Michigan)
Finally it was established that a definite and positive relation exists between high pride in a work group and high productivity, although it can hardly be determined which one of these two factors is cause and which one is effect. High pride produces high productivity which enhances pride in the work group still more, and so on, which may be called a circular-causal or chain process.

C. Morale and Motivation

Dr. Katz in attempting to measure and evaluate the interplay between motivating forces and group morale in industry, arrives at the following important conclusions:

Confronted with problems of human adjustment and human motivation modern management has to concern itself with the human equation in spite of the excellence of organizational charts.

A definite relationship exists between job satisfaction and occupational status. In general, people doing the more interesting types of work requiring greater skills are much happier in their jobs. A positive relationship was also found to exist between the degree of skill and morale.

The general philosophy of management that emphasizes the importance of external rewards cannot be supported. Workers like jobs that give them a chance to display their skill and to show their worth, and they place considerable value upon being a member of a congenial work group. They are favorably affected by a supervisor or a boss who treats them as human

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8 Dr. Daniel Katz, Morale and Motivation in Industry (Survey Research Center, University of Michigan)
beings. They are motivated to work for a company where there is confidence in the fairness of their treatment by top management.

D. Resistance to Change

Whenever it becomes necessary in industry to change a worker's job due to a change of product or a change in production methods, a markedly greater rate of absenteeism and labor-turnover can usually be observed, together with a drop in production. It was felt that the pressing problem of resistance to change demanded further research for its solution.

One of the most comprehensive surveys in that direction was conducted by L. Coch and J. R. French, Jr.\(^9\) at the plant of the Harwood Manufacturing Corporation in the small town of Marion, Virginia. From their report it became clear that, as far as management is concerned, two main problems had to be solved:

1. Why do people resist change so strongly?
2. What can be done to overcome this resistance?

Three consecutive steps were taken:

1. A preliminary theory was devised to account for the resistance to change.
2. A live experiment was conducted at the factory.
3. The results of the experiment were interpreted in the light of theory plus new data obtained.

Two experimental groups and one control group were established for the experiment, and different methods were tried out in handling each of

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these groups. Democratic procedures were devised and used in the transfer of the two experimental groups. The first procedure may be called "Participation through Representation" which meant that a representative group elected by the workers to be transferred participated actively in designing the changes to be made in the jobs. The other democratic method used with experimental group two was "Total Participation". In this case all members of the group to be transferred participated in designing the changes which became necessary. The third group, called the control group, went through the usual factory routine when they were changed. All that was done in this case was to modify the job and to set the new piece rate. Explanations were given afterwards in a group meeting.

The experiment resulted in a determined resistance which developed in the control group. Expressions of resentment and voices of aggression against the management became loud, together with open or hidden acts of hostility against the supervisor. On the other hand, the success of the democratic procedures as used with experimental groups one and two was obvious. These two groups recovered fast, their rates of relearning improved steadily, the workers showed definite co-operation, and there were no quits. By comparison, however, the technique of Total Participation showed the best results.

The findings of this research were interpreted by its authors as follows: It is possible for management to modify greatly or to remove completely group resistance to changes in methods of work and the ensuing piece-rate. These changes can be accomplished by the use of group meetings in which management effectively communicates the need for change and
stimulates group participation in planning those changes. Pointing to the
very tangible success which this experiment brought about for the Harwood
Corp. (greatly reduced group resistance to change together with reduced
turnover and aggression, improved labor relations in general, greater co-
operation etc.), the authors of that study referred to action-research as
the only key to better labor-management relations. "It is only by discover-
ing the basic principles and applying them to true causes of conflict that
an intelligent and effective effort can be made to correct the undesirable
effects of the conflict".

E. Implications of Social Change

"The creation of a change in the social system can cause the
development of resistance", says Alvin Zander 10 in his resumé on certain
research findings in connection with necessary changes of the social system.
He is convinced that practical and useful social science can be applied.
After citing a few examples of resistance growing out of administrative
changes in business and industry, he finds one common denominator which
might help to define the concept of resistance. "If a person believes a
change has been made, or fears potential change, it makes no difference
whether or not it is true in fact. He will act as though there has been
a change".

The author names a few conditions as conducive to resistance:

1. Resistance can be expected if the nature of the change is not made

10 Alvin Zander, The Problem of Resistance in Creating Social Change
(Institute for Social Research, University of Michigan)
clear to the people who are going to be influenced by the change. Giving information about the impending change is important.

2. Information alone is not enough, since different people will see it differently. We tend to interpret in our world the things we need to see, and some people may see potential threats in even a simple change of office routine.

3. Resistance can be expected when the person to be influenced by the change is caught between strong forces pushing him toward the change and similarly strong forces restraining him from changing.

4. Where people are simply informed about a change, and afterwards allowed to ask questions, strong resistance is bound to arise. Total participation, however, that provides an opportunity to develop one's own motivation, will decrease resistance effectively.

5. Changes made on personal grounds rather than on impersonal sanctions will, no doubt, cause resistance.

6. Resistance also may be expected if established institutions within the group are ignored. In this case the change would affect strong habitual ties governing certain customs in working or in relations between people.

In his effort to devise useful means to help prevent or decrease the resistance which generally arises in the change of a social situation the author developed the following methods and principles:

1. Resistance will be prevented to the degree that the changee develops his own understanding of the need of the change.

2. Two-way communication - from the administrator to the group and from the group to the administrator - is necessary. Without it there is no complete understanding - so essential in the prevention of resistance to change.

3. Resistance may be less likely to occur if the changee participates in making decisions concerning the change, and if he is given a chance to discuss the major factors involved in the change.

4. Finally, resistance will be less likely to develop if facts which point to the need for change are gathered by the persons who must make the change.
F. Socio-psychological Forms of Measurement of Human Factors relevant to this Study

The following information was gathered from a brochure called "Human Relations Study Techniques", published in March, 1949 by the "Survey Research Center". The main point of departure in the Center's program was the thorough following of the scientific approach that has yielded such rich returns in other fields and the implementation of this approach by utilizing modern advances in socio-psychological techniques. This procedure promised to give reliable and valid measures of the many human factors relating to group morale and group productivity.

Based on a research of the motivations which influence group morale and productivity, it is specified which factors are to be measured and also which checks and controls are necessary to establish causal relationships. If, for instance, the human causes of differences in production are studied the research design must rule out the possibility that those differences are due to technological processes. Thus work groups are comparable only when the type of work they are doing is essentially similar and when the technological factors affecting the work are the same.

The actual field work may include three types of research:

1. Interviews with rank and file personnel, supervisors, managers and union representatives;

2. Observation of the behavior of the group and

3. Systematic collection of objective records already available.

The interview materials are first coded and then scaled according to the codes. The original planning and the analysis represent the real heart of the research process which, when effectfully conducted, should carry enough
basic material to permit the development of continued research studies for
the establishment of objective standards and principles.

A genuine advance in the study of social phenomena has appeared in
the form of the case study approach. Participant observation is the rule,
together with interviews, study of available records etc. which provide a
thorough knowledge of the functioning of an organization.

"In our program of human relations in group organizations", reports
Dr. Katz11,"we set as our over-all objectives to find out (1) the causal
conditions which make for a high level of group performance, and (2) the
conditions which make for high morale and for the maximum individual satis-
faction to group members. In this framework we postulate as independent
variables the objective factors outside the individual such as the things
his boss actually does, or the incentives the company actually sets up or
the organizational structure. Our dependent variable is the performance
in the groups. The intervening variables are the perceptions and attitudes
of the group members."

In this connection we refer again to the example of the survey on
"High Morale and Low Morale work groups" as described in a previous chapter
of this study. There, the following research method was used: A design was
set up, with productivity as the dependent variable, supervision and manage-
ment as the independent variable and worker morale as the intervening
variable. Company figures were accepted in lieu of measurement of producti-


11 Dr. Daniel Katz, The Role of Quantitative Research in Group
Organization and Group Functioning (Institute for Social Research;
University of Michigan)
interviews. The various dimensions of morale of the rank-and-file employees were measured by depth interviews with all employees in matched sections and divisions. Thus three independent sets of measures were obtained which formed the scientific basis for the findings and conclusions of that research study.
CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

I. CORRELATION OF RESEARCH FINDINGS (CHAPTER IV) WITH STATISTICAL DATA AND PSYCHO-SOCIOLOGICAL EVIDENCE OBTAINED (CHAPTERS II AND III)

Extensive scientific surveys and research projects which were conducted during the past few years for studying human relations and social organizations, have provided us with a whole array of new knowledge pertaining to human behavior and social attitudes. Those surveys dug deep into many areas of labor-management relationships in industry, dealing in particular with specific problems such as group behavior, group morale and productivity, motivation, group influences, supervision, leadership etc. Means of measuring human factors involved in such group relationships in industry were successfully tested and developed, and certain standards and principles were established which may well serve as a yardstick for management-labor relations actually existing in specific industrial organizations.

We refer to our study reports on factors relating to group morale and productivity, high morale and low morale work groups, the importance of democratic methods in supervision, the causal relationships between morale and motivation, worker’s resistance to changes and how this factor can be measured and modified and, finally, the concept of social changes and its implications.
"It is important to make explicit our values when proposing solutions or when evaluating research.--- Our central norm of democratic ethics states that social policy-making and social changes must involve the maximum collaborative participation of all persons and groups concerned.

Let us now examine the operational meaning of the norm of collaboration as applied to labor-management problems. Both labor and management have an obligation to improve their own and each other's skills of collaborating; for collaborative problem-solving is a difficult art and science which can be maximally utilized only where all parties concerned are highly skilled. In a sense this is saying that our norm implies that collaboration must also be educational in its intent. Each party must keep open the channels of communication not only in order to influence the outcome of the collaboration but also in such a way as to improve the understanding and skill of both itself and the other party.\[12\]

Looking backward upon the activities of Jack & Heintz during the war years 1940 to 1945 it can be said that, based upon the printed sources of information available, the labor relations in that company and all problems connected with it were handled in a unique spirit of human understanding, social collaboration and with a faith in truly democratic values which prevailed throughout the entire organization.

Here is a short summary of personnel techniques used by Jack & Heintz which are either identical or compare favorably with those methods and attitudes which, in accordance with the scientific surveys as described in chapter IV of this study, had achieved the highest results in boosting employee morale and productivity:

1. Absolute honesty and sincerity on the part of management.

2. Full grasp and appreciation by management of the behavior of all their "associates" from the bottom level up.

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3. Personalized inter-plant communication system which helped everyone from the bottom group up to understand and appreciate management's plans, problems and policies.

4. Sincere recognition by management of the importance of the individual man.

5. Absolute fairness in the handling of grievances and promotions.

6. New methods to eliminate the traditional causes of the gulf between management and labor.


8. Development of a strongly motivated will to work.

9. Unique system of benefits to "associates" and safeguarding of their economic, physical and personal security.

10. Constant improvements of physical surroundings, innovations of technical nature and ensuing simplifications in the working process made work for the Jahco "associates" interesting and challenging. The workers were proud of their work group and equally proud of the products which they made. There was no monotony in the working procedures at Jack & Heintz, a factor which contributed greatly to the steady boost of output.

This enumeration of democratic, liberal and forward-looking techniques used by Jack & Heintz in relation to their employees is a matter of record corroborated by numerous public statements, books and articles printed in business magazines such as Business Week, Fortune, Steel, Iron Age, Human Relations and others.

It is equally a matter of fact that the names of Jack and Heintz and the exceptional treatment given the workers had such an excellent reputation and strong attraction that around 30,000 names of job-aspirants were continuously to be found on the waiting lists of the company. Competitive companies and other industrial organizations in the region, which had to suffer under this strain on the labor market, realized the danger of this
situation and complained about it repeatedly in local papers and trade magazines.

Finally production records, as far as those could be made available, showed that all through the years of its war-time existence Jack & Heintz was in a position to improve the quality of its products, to cut the costs of production, to lower the contract prices per unit and to increase profits.

It shall not be denied, however, that the combined technical skills of both Bill Jack and Ralph Heintz also played a role in the steady upward development of their firm.

But the main credit for the almost legendary success of this concern is due to their methods of handling the human factors involved in industrial relations. Management and Labor at Jahco were fully aware of their own social obligations. They did their best to co-operate in trying to solve complex human problems which they considered a challenge to their administrative and productive capacity. Not only did Jahco's system of communication conform to a classical definition by Johnson & Johnson:

"Communication is to inform, to tell, to spread information. Communication requires the capacity of one individual to convey his feelings and ideas to another. It is a network of partial or complete understandings."\textsuperscript{13}

but it also was part and parcel of Jack & Heintz's conviction about human relations that the forces that propel people permanently never come from outside, but only from within.

\textsuperscript{13} Johnson & Johnson, \textit{Communication in Business and Industry} (New Brunswick, N. J.; 1949), p.3
"Each of us is the center of his own universe. Our basic drives are to manipulate the outer world in terms of self-interest, self-expression; the ways in which we want and like to do things are often of more importance than the ends which we may believe that we desire to achieve. Ego transcends profit in both its narrow and its wider sense, and personal methods are more important than the profit-motive."\(^{14}\)

These principles were realized by Bill Jack who treated his "associates" first and above all as human beings. In an outstanding performance of enlightened leadership he used the art of human understanding to raise the morale of his employees (including pride in their work-group, pride in identification with the company and its products, satisfaction with their jobs, wages, security measures and chances for promotion) to such an extent that it was almost unavoidable for production figures to hit record heights.

II. SIGNIFICANCE OF THIS STUDY
FROM A PUBLIC RELATIONS POINT OF VIEW

"Public Relations must coordinate the knowledge developed in all fields especially in the social sciences. From this synthesis of knowledge will emerge a new perspective and purpose which will enable the competent practitioner to modify and improve the purpose of all organizations and of the men who control them. Thus, working towards the advancement of mankind, Public Relations must assist in the integration of specialized knowledge and the application of this knowledge to the development of new purposes for all forms of human organization."\(^{15}\)

Bill Jack was his own best public relations practitioner. In his every day dealings with employees as well as with other "publics" of the

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\(^{15}\) F. T. LeBart, *op. cit.*
company he lived up to the highest standards of sound Public Relations. He was always concerned with the well-being of his "associates", with better and cheaper products for his customers and with security for his stockholders. As a skilled worker and former union man he had a profound interest in and understanding of the human and social problems besetting the workers in his plants, and as an enlightened executive he knew that all the deepest elements of personality and character traits, such as imagination, reasoning process, interests, desires and ambitions, not to mention weaknesses and prejudices, had to be considered just as important in business as anywhere else.

It is rare and remarkable indeed when an individual or a company keeps following certain self-imposed rules of conduct without realizing that those very same methods have been declared by another authority as guide posts for democratic attitude and sound social behavior. This was the case with Jack & Heintz whose personnel policies corresponded almost to the letter to a statement of principles developed by American business leaders, principles which may well serve as a yardstick for successful Human Relations in modern business: 16

1. Men are interdependent.

2. Employees are social creatures, sensitive to considerations of pride, achievement, desire for esteem and affection and similar non-economic drives.

3. Respect for the dignity of the individual. Connected with self-esteem is the need for self-expression, opportunity to advance, success in one's endeavors and the satisfaction of attaining a useful place in the world.

4. Need for the esteem of others, for recognition and a confidence that they will be treated like human beings in all relationships.

5. Basic instinct for survival which includes the obtainment of the essentials of the most modern, decent standards of living.

6. Employees desire security about their future.

7. Men have their social instincts. They naturally tend to associate with those who share their interests and to develop team-work in pursuing common undertakings.

Where these needs are being met men are happy, co-operative and productive. Where these needs are not met men become morose and bitter. Thus it may be concluded that business is more than a matter of competition, subjected to the impersonal laws of supply and demand. It should be understood that business exerts a vital influence upon the lives of men, and it in turn is influenced by man's nature and his aspirations. Lasting success will be achieved only where all the moral responsibilities of management and labor are fully met.

III. TOWARD INCREASED USE OF DEMOCRATIC METHODS IN AMERICAN INDUSTRY

"Private Business is gradually reaching a danger point. It may not be too late, however, to save it from stifling control, socialization or nationalization. The methods are:

1. Fuller service to the public;
2. Greater candor in giving out information;
3. A presentation of the overall position of business in social and cultural history.

The administrator of the future must be able to understand the human-social facts for what they actually are."17

The personnel policies of Jack & Heintz brought about closer understanding between management and labor to the mutual benefit of all concerned.

17 F. T. LeBart, op. cit.
It is only natural to assume that industrial circles will be interested in giving the widest possible publication to those methods and theories which resulted in happy workers and high profits. Before such a step is undertaken, however, the question must be asked: Are American employers interested in changing the traditional antagonistic or at best indifferent attitude which exists generally between employer and employee into a more personal and more constructive relationship? If the answer is yes, then Jehovah policies will be studied. If the answer is negative, and if the social, economic and physical welfare of the employees is regarded as something that can be lightly passed on to government when depression conditions arise, then those policies can lead only to confusion. "An improvement in personnel methods may be no more revolutionary than installing a new machine in the factory, but many employers find this truth hard to accept." 18

The status of Labor has undergone radical changes since industry started to be a powerful factor in this country. More and more concessions voluntarily and otherwise, were made to the working men, and this progressive development has actually never reached a standstill. After a certain amount of physical security, including working time, adequate pay and working conditions, was achieved for the workers the social sciences entered into the picture. New norms and standards were developed and recognized: happiness on the job, human dignity, social status within the organization, psychological and sociological needs, desire for belonging, affection,

18 H. R. Ward, op. cit., p. 127
fair treatment, recognition, respect, identification and many other drives of non-economical and non-physical nature.

Where those important human factors are taken into consideration men will be happy. Where they are neglected, however, or overlooked wide-spread dissatisfaction and frustration may result. Frustrated men often seek compensation in aggressive action. But where each group feels sure of the other's sincerity both will feel free to work for the common good.

The Labor problem of today is not so much an economic one, but one of a need for the understanding of human wants and desires.

"The work of each individual cannot be considered in the light of her or his economic motives alone. The fact is that, within the limits of physique and skill, work effectiveness is related to the general outlook of the individual and particularly to that part which can be described as his or her social situation."¹⁹

"Attempts to engender a satisfied and co-operative atmosphere amongst employees, by offering them incentives based on future rewards, so often miss their mark. What is usually required is not an augmentation of the logical motive, but an enrichment in present social living. Satisfactory living is social living. Thinking has been warped by an over-emphasis of economic motives."²⁰

Ever since the begin of human experience men have worked. Man's emotional satisfactions stem, therefore, to a great degree from the sense of accomplishment which the individual derives from his day-by-day labor. But does the average working man of today draw this satisfaction from his job? If not, how can he recapture it? This is a crucial question upon the answer to which may very well hinge the solution to the Labor problem of today.


²⁰ T. N. Whitehead, op. cit., p. 23
We live in a democratic society, and there is no reason why the same principles, held in awe and respect as far as our form of government, jurisdiction and education are concerned and which govern our social and community relations, could not and should not be fully and consciously applied to the manifold human relationships concerning our industrial organizations.

The example of the personnel policies of Jack & Heintz and the correlation of the physical and psycho-sociological data obtained with the findings of previous research studies conducted in the field of Human Relations in Industry have tended to prove on a broad level that a positive relationship exists between consideration for employees and group morale and productivity. But increased and deepened consideration of the human element can include many more factors. It was found "that the first line supervisors of high productivity groups do behave somewhat differently towards their employees. In general it might be said that they are more responsive to the needs of their employees. Since the needs of employees in different situations differ supervisors of high productivity sections in different organizations and in different sections behave quite differently. In one organization they may give them more responsibility in doing their work than the low productivity supervisors in that organization do. In another the high productivity supervisors are more helpful in training the men for better jobs."²¹

²¹ Unpublished letter from the "Survey Research Center", University of Michigan, May 22, 1951
It is, therefore, suggested that truly democratic procedures in personnel relations combined with increased and deepened consideration of the individual worker as a human being, be among the foremost goals of our industrial organizations. A development in this direction is not only desirable but necessary in the interest of healthy employer-employee relations and for the benefit of safeguarding the democratic structure of our society.

As pointed out in the "Introduction" of this study, industry in this country is already gradually moving away from the idea of regarding the worker in the simple sense of "economic man". This evolutionary process toward increasing acceptance of human factors in industrial relations cannot be stopped at this stage of the game without running the risk of stirring up dangerous reactions. It is, however, possible to speed up this liberal development considerably through proper methods of education.

It is recommended that a central clearing-place be set up for the purpose of collecting data, figures and any information obtainable concerning the use of Democratic Methods in Management-Labor Relations and of Humanism in Industry. Such information may be gathered from all sources such as management, public relation departments, labor unions, individual executives or workers and competent and interested outside observers.

No effort should be spared to impart any such information to industrial executives all over the country - putting special emphasis on successful employee relations, where those have helped to increase production and profits and to raise the good-will and prestige of the company in the community. A monthly publication should be established for the purpose of collecting, screening and publishing those facts and figures which may
serve best the purpose of working towards the final goal of complete democratization of the industrial and business relations in this country. Educational lectures, pamphlets, radio, television and newspaper announcements, as well as motion pictures could play their parts in accelerating this process of humanizing American business and industry.

One of the best incentives in this connection would be the publication of a "Who's Who" containing the names of enlightened managers and democratic executives. Such a year book would deal in detail with the personalities of outstandingly democratic leaders in industry together with their achievements in solving labor and production problems through the consideration of human factors involved. The publication should also stress and give favorable mention to cases of conscious and successful efforts towards establishing workable employee relations on a genuinely co-operative basis which, by following democratic principles, helped to boost production figures, cut production costs and increase company profits. A proper use of this "Who's Who of Enlightened Management in Business and Industry" may have the effect of hastening a desirable development which is already well under way.

Finally let us never forget the American creed. It is our fundamental belief that men should be free and that free men can achieve more than slaves. But to back up this ideal each one of us as an individual and as a member of a group must accept the obligations and responsibilities that go with freedom. In our social relations we must work together as a team if common problems are to be solved successfully. Co-operation, not antagonism, is the key to achievement. The practice of sincerity and
honesty of thoughts and actions, having faith in each other, insight into and understanding of the other fellow's problems will pave the way toward the recognition of individuals as human beings with their own rights and dignities. It will lead to a mounting awareness by each one of his own responsibilities towards the society of which he is a part. These democratic concepts are necessary prerequisites of smooth functioning labor relations. They are the only solid foundations for a nation-wide co-operation of labor and management and a Humanization of American Business and Industry.
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