

The Human Side of Safety

(Early Morning Classes)

The series of four lectures on "The Human Side of Safety" was arranged to interest and provide information for the many safety men and other delegates who recognize the importance of understanding man's mental idiosyncrasies in connection with employment activities. The four speakers were selected from among outstanding leaders in medical service, industrial psychiatry, supervisory training, and business salesmanship.

The lectures were delivered before immense audiences on four successive morn-

ings of the Congress, beginning Tuesday and ending on Friday morning. Each of the speakers was introduced by W. H. Cameron, Managing Director, National Safety Council, Inc., who briefly epitomized the subject selected by the lecturer.

The following records of these addresses are taken, in the first three lectures, from specially prepared papers; the fourth lecture is a condensation of a stenotype report. They present a valuable cross-section of a week of intensive discussion and interest to all the delegates.

TUESDAY MORNING SESSION

October 17, 1939

Man's Usefulness and Limitations from a Physical Standpoint— His Proper Placement

By HAROLD A. VONACHEN, B.S., M.D.

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The consideration of man from a physical standpoint and from the standpoint of his proper placement in industry naturally covers such a broad field that hours upon hours could be spent in discussing the subject and reading the numerous articles that have been published during the past few years. But even so, there is much to be desired and much to accomplish, for I fear that many industries still ignore the inevitable, while others are approaching the issues through haphazard methods which will be of little value to the future of industry or the health of employees.

What factors control man's physical fitness? Is it only necessary to determine his physical defects, or are there other essentials to determine before an individual be-

comes useful, without limitations, for his place in industry?

The answer to these questions lies in the undisputable fact that an Industrial Relations Program must become an essential part of the routine to guide the individual to his proper goal. This certainly is not an exclusive medical problem. Let industry realize that each person presenting himself for employment is a human being attempting to find an honest means of livelihood and that his problems are part of his very being and must be accepted with him as a whole.

Therefore, I say that physical examinations alone fall far short of being the entire answer to determine usefulness, physical fitness and proper placement. The mental

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capacity of the man must likewise be considered, his response, his personality and his disposition all becoming vital problems to be solved by close cooperation between personnel and medical. Less than a year ago before the Greater New York Safety Council, I expressed an opinion that "Aptitude Tests" will some day become a routine as essential as physical examinations, for until we scientifically determine each man's ability to coordinate and respond, we have not reached the goal for which we all strive.

Considerable time should be taken to cover these aptitude tests, for strictly this is included in the field of psychology rather than medicine. I believe that it will be the function of the personnel department to apply these tests, which should include a group of tests to control the various psychological reactions of man, such as attention, reaction time, memory, speed of decision, emotion, honesty and temperament. This could be followed by mental capacity tests and trade tests so that before the individual is presented to the medical department the employment division has a fair conception of the individual and his capacity for the job selected.

In this connection, it is interesting to comment that a year ago a number of tests were made at the "Caterpillar" plant to determine reaction time and its relation to fatigue and the part that fatigue plays in accident causation and production. During these tests it was found that the so-called "accident prone group," also known as the "repeaters" in industry, showed a definite slowing of reaction time in comparison to normal. It was also shown that those individuals suffering from chronic diseases revealed a definite abnormal reaction time, naturally making themselves more susceptible to accidents.

It would appear as though I am becoming elementary if I dare to speak of the type of physical examinations necessary for proper determinations, and still I have been repeatedly shocked and ashamed of some of the physical examinations, if they may be called such, that are still being made in industry even today.

If you consider a quick look at the teeth, a rapid "once-over" of the chest, and a cough for a hernia, a proper examination, then think of the false sense of security

under which both employer and employee are laboring. The employer tells the world with great pride that he is spending good money to determine and maintain the health of his employee, and the unfortunate individual enters the ranks of the select under the terrible delusion that he is in "A No. 1" physical condition, when he may be suffering from syphilis, diabetes, early tuberculosis or numerous defects which are hazardous to both himself and his fellow employee. It would have been far better if no examination whatsoever had been made.

I believe that each individual should be clothed only in nature's garb and given a complete physical examination from head to toe, followed by a blood test, urine analysis and a complete eye check. The "Caterpillar" has its own laboratory where blood, urine and other essential tests are made for the determination and betterment of the employee's health.

In connection with our laboratory tests and general physical examinations, it was interesting to note that there were positive urinary findings in from four to five per cent of the individuals examined. This included the findings of albumen, sugar, pus and numerous other incidental findings which would naturally present themselves in a routine urine analysis. Now in every instance in which there were urinary findings, the individual was informed of his condition by the plant physician or the medical director and asked to present himself to his family doctor for treatment and then a re-check was made within a period of three months.

It was also interesting to note that with our routine Kahn tests syphilis was found in approximately two per cent of the men examined. It has been our conviction for the past four years that syphilitics are acceptable for industry, provided they are not in the contagious stages and provided they present no neurological symptoms. A definite routine is followed in which the individual is informed that he must obtain treatment from his family doctor for a period of 72 weeks, and that once a month he must present a slip to the medical department from the attending physician that he is continuing his treatments. After the completion of the treatment the individual is checked every six months.

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To date, this plan has been successful and we contend that these individuals show no higher accident rate or absentee rate than normal. It is also important to mention here that the most common physical defect found during physical examinations is infected teeth and gums, and I believe that industry must attempt to solve this problem in some way so that men are educated and made conscious of the fact that infected teeth and gums contribute greatly to numerous disabilities which occur in their future.

We maintain our own X-ray department where X-ray examinations are a part of the examination of every individual subjected to a dusty occupation. Furthermore, I believe that each industry should have a proper consulting staff so that extraordinary problems, such as eye, ear, nose and throat, genito urinary, orthopedics and dermatology cases may be solved with honesty to both parties. No medical director, in my opinion, is able to stand alone in this day and age and solve all of the medical problems of industry.

What is the purpose of physical examinations? Is it to determine and to accept only those who have no physical defects?

No, from a humanitarian standpoint, the answer is endless. Physical examinations, that is pre-employment examinations, aid in the final determination of man's place in industry, discover the presence of contagious and communicable diseases, thereby protecting the personnel already employed, detect mental and physical defects which, when remedied, make the individual a useful employee.

Periodical examinations reveal early organic disease, often prevent epidemics, reduce accidents and increase efficiency and production and serve as a guide for health education. A properly and honestly conducted medical department becomes the greatest good will ambassador in industry if the worker is assured that his problems are received with sympathy and confidence and that advice is always given for his betterment.

What are the causes for rejection from a physical standpoint? Here we are confronted with a serious and far reaching problem and one which must be discussed with complete frankness. Industry must accept the fact that physical examinations are

not made to reject the less-than-perfect applicants. There are still some industries today, however, that are fastly maintaining this standard, much to their discredit, for as I mentioned previously, one of man's primary instincts is to care for himself and his dependents and not to be dependent upon society for his livelihood. I do not hold that any one industry should employ all of the defective workers, but certainly it should be willing to accept its share, for if they are not acceptable as employees, they are paid for, without return, by social taxation. Many men and women have physical defects which are correctable or which do not prevent them from becoming useful and efficient workers.

Ninety-nine per cent of the outright rejections should fall under the following four classifications:

1. Acute contagious and communicable diseases—this list is endless but includes such diseases as active tuberculosis, syphilis in the contagious stages, infections and contagious dermatitis, gonorrhea, etc.
2. Heart disease with decompensation or with findings that would indicate that exertion would cause serious end results.
3. Kidney disease accompanied by hypertension and circulatory change.
4. Uncorrectable visionary defects.

The remaining one per cent will call for a thousand various defects including mental abnormality, hernias under certain conditions, arthritis, advanced diabetes, etc.

Allow the applicant with his correctable defects to enter employment with the understanding that he must consult his family physician and make every effort to improve his general health. Make him realize that it is the honest effort of industry to help him solve his problem. Make him feel that the medical department is his as well as the company's, and that industry has made a friend of him as well as his family physician, who then can be often called upon to give his cooperation in the future.

A problem which often presents itself is, "How much of the information obtained from physical examinations is needed by the man's supervisor? How should it be imparted to the supervisor?"

It is my opinion that the only information that is important for the supervisor is that which will protect the individual and his fellow workers, facts which are

essential to the preservation and maintaining of health, and these should be a direct communication between medical and supervisor. I am strongly of the opinion that medical records are the sole property of the medical department. This fact should be impressed on every individual examined. The physician who has descended to the lowest ranks is he who will become a part of a rejection scheme perpetrated by an employment department that fails to have the necessary intestinal fortitude to carry through its own problems.

Even though the medical director and the plant physicians are employed by the company and paid by the company, this still does not alter the fact that the individual is still entitled to maintain his dignity by keeping secret the body ills to which he is subjected. The code of ethics of the medical profession applies equally to industry as well as private practice. It also must be remembered that if the medical department is to be respected by the employee, the insurance and claim departments should expect only an honest report in determining specific loss and temporary total disability.

It is a well known fact that many times in the past the physician has been called upon to lower temporary total disability and specific loss contrary to his own honest opinion. If this practice continues in any industry, you can expect the employee sooner or later to feel that he is not being given an honest return for injuries received, many times not through his own fault, but through negligence on the part of the employer or the fellow worker.

We have also maintained a rule that any supervisor may request a physical examination on any of the men in his department. If he observes an individual whose production is below par or who appears to be in ill health, he immediately calls the medical department and the individual is requested to appear for a physical examination. In this way we are often able to detect early organic disease, to correct this defect and have the individual continue his employment without lost time.

In considering man's place in industry, we have called upon personnel and supervision for guidance and assistance, but to complete our problem the safety depart-

ment with its engineer must join hand in hand.

We must not fail to recognize that certain jobs require certain requisites as far as the physical make-up of the individual is concerned. Even granting that the individual has been approved as to aptitude and mental requirements, we still must recognize certain factors which control every individual's limitation on a specific job.

For instance, an individual who presents early increased linear markings of the chest would not be particularly recommended as a foundry worker; or an individual who shows a tendency towards high blood pressure or even functional heart disease, would not be recommended to work in high places. This would also be applied to crane operators. Precision workers would naturally be expected to have a keen eyesight but would not necessarily be rejected because of some incapacitating physical condition. An individual susceptible to frequent colds and sinus infections and bronchitis would not be recommended as a spray painter. Welding has become a point of contention during the past several months, especially with the advent of leaded steel, so that naturally the medical department should be on guard as to the type of men acceptable for this work.

This particular phase impresses upon all of us the fact that the medical department must have a thorough knowledge of each job operation expected of the individual hired so that limitations may be recognized by the medical department and the man so placed that he is not a burden to himself, his fellow worker or the employer.

We are all aware of the constant changes in industrial processes. Mechanization has not only tended towards making little men big, but it has, as we all know, increased production with the resultant lowering of unit cost. Because of the lower price for which machines are sold, a great portion of the American public today uses mechanized equipment to do the tasks which yesterday were done by hand. The cycle is a closed affair because our customers will quite likely be your employees and your customers will be someone else's employees and so on *ad infinitum*. So from the safety standpoint, in my mind it is highly advisable that your production engineering department

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seek out the basic causes of accidents resulting from the use of your products.

With the increased use of mechanized methods, which, to put it briefly, is a drift from brawn to brain, it is readily apparent that simply the purchase of a piece of equipment does not in any way, shape or form give any assurance that it will be operated properly. This piece of equipment may have been designed with all safety precautions taken into consideration, and again it may not have. In the latter case, you should either reject this equipment or make any additions to accommodate or to offset any unsafe factors. This represents management control; however, management must go one step further to see that proper training and instruction programs are instituted.

A classic example would be to expect a yard laborer who formerly handled castings, etc. by manual methods, to step into the cab of a crane after a few mumbled or printed instructions and do a good job. Many of us have learned through tragic experience that this does not work. In many cases the men replaced are unfit from the mental standpoint to take over the operation of mechanical equipment. But the fact remains that from a humanitarian standpoint, he must be absorbed; we cannot expect some other industry to take over all our culls.

So from a standpoint of good industrial relations it becomes imperative that great effort be made to rehabilitate, through effective training and educational methods, the changing of the employee's outlook, and effect a transition by getting this employee to use more brains and less brawn.

Another factor which deserves special attention is the increased use of toxic chemicals. From a logical standpoint a great deal is known of the effect of various toxic properties of different substances. Through close cooperation with the medical director the safety engineer has learned of these factors. However, be that as it may, many times the safety department functions entirely on existing equipment and very often is not aware of the equipment being designed by the production department. This is a very serious fault and is found in many safety programs.

The safety department should by all means be given consideration where any new processes are being considered. If this is

done a great deal of trouble can be eliminated because necessary ventilation and other safety devices can be installed immediately, thus preventing the first accident instead of the second. Volumes have been written on toxic chemistry in industry but the fact still remains that very simple, direct methods must be used before the employee can be assured of any degree of safety.

Another thought to consider is that no matter how highly mechanized an operation may be, there comes a point where the machine leaves off and manual labor carries on. A classic example is the average foundry shake-out. Core rooms, moulding floors, pouring station equipment are all models of industrial engineering and yet the shake-out stations quite often remind one of a cross between a galley slave ship and early irrigation methods on the Nile. Needless to say, there is room for improvement at this point.

The use of protective devices on the machine, as well as on the employee, has resulted in greatly reducing the number and severity of accidents. The Convention Exhibit Hall at this Congress is a living catalog of these devices. We all know safety goggles reduce our eye cases. Many of us tolerate a great deal of argument regarding the wearing of this equipment, and if the safety goggles are left in the tool boxes instead of being worn, we soon come face to face with an eye problem.

The same applies to the respiratory protection devices. While the filter may be 98 per cent efficient, the device may be made practically non-operative because of lack of maintenance or a stubborn attitude on the part of the employee.

Many devices have been made to furnish protection to the body, such as aprons and hand pads and gloves for the protection of the hands and arms. The much cursed and discussed safety shoe is doing a remarkable job in the minimizing of toe injuries. All these devices, being inanimate in nature, have fixed limitations. The effectiveness or range of limitations of these devices is determined by the degree of intelligence that the employee applies.

Quite often the employee's reaction to safety devices is of a negative nature. These safety devices are physical manifestations of the thought of safety. One of the thoughts

of safety is caution, and it is inherent that we, as human beings, at times resent a restraining order or caution because it is at variance with the aggressive, adventure-some spirit that we all have in varying degrees.

The problem of procuring cooperation from the employee in regard to using safety devices requires a great deal of tact and is best approached by showing the employee that even though he himself has successfully done certain operations for a number of years without this equipment, many who have performed that same operation over even longer terms of service have met with serious disaster. One of the basic resentments or aggressions that the employee might have against safety devices is that it represents to him not management's answer to a problem, but management's distrust in his ability. We have all heard the nonsensical statement that "only sissies wear that stuff." The ultimate solution of this problem is one of the basic challenges to anyone connected with safety work.

In the planning of new protective devices or reverses to existing equipment, it is a good idea to consider the employee as well as the mechanical factors of the processing equipment. All too often machines and equipment are re-arranged and glorious production results are obtained, but upon closer inspection it is found that the unit had started operations before all the exhaust and ventilation fans had been arranged to accommodate new machine operations, aisles

have been re-arranged in such a manner as to necessitate making a long circuitous route to such service facilities as toilets, wash rooms, drinking fountains, etc.

The average employee today has far less manual labor to perform and shorter hours to work than of the past. The physical limitations of different sizes is not as important today as of yesterday. The brain factor is far more important.

In conclusion, I realize that many points have not been covered, but I have attempted to formulate a few opinions from experiences gained from over 80,000 examinations over a period of years. I feel that the factors controlling the employer's physical fitness include his physical findings, his mental health and his aptitude and ability to acclimation—that physical examinations should be complete and thorough, including all necessary laboratory and X-ray findings and also a well arranged consulting staff—that rejections should be made only after all exhaustible means are used to place the individual—that distinctions must be made for specific jobs and that close cooperation is necessary between management, personnel, safety and medical.

Certainly this will not cure all the problems of man's usefulness and proper placement, but it holds to the theory that man must live by the sweat of his brow and that industry is contributing to the best of its ability to further the health of the worker and to make this country the place that it is—the finest in the universe.

WEDNESDAY MORNING SESSION

October 18, 1939

Man's Mental Attitudes

By DR. LYDIA G. GIBERSON

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There are things which I have wished for a long time to say about the necessary connections between psychiatry and safety. I have observed for more years than I care to remember the emotional maladjustments of employees, and it is my experience and my

judgment that the majority of accidents have their sources in the human factors. I have come to believe that an accident is a tell-tale symptom of emotional illness.

This connection between emotional sickness and accidents is one which needs more

emphasis and wider acceptance. The United States lags behind other countries in realizing the importance of emotional factors to safety and to industry as a whole. Several European countries are in advance of our practice, but there are many indications that American industry is waking to a new conception.

I can remember clearly my own earlier attitude. When I began my medical education I had, as every young medical student has, a profound belief in the physical and objective aspects of medical treatment. Broken legs, stomach ulcers, and the usual run of physical ailments seemed a complete and self-sufficient world large enough to contain mine and any other medical man's whole life of endeavor. I had a distrust of anything which could not be measured or tested in a laboratory. The mental things I dismissed with a shrug as being related to the Victorian "vapors."

Such callowness could not last. I began to find the world of medicine a much more intricate affair than I had imagined. I began to be aware that many illnesses seemed to lack a physical origin. Many of the symptoms I met seemed to be secondary, the result of some more basic cause. I found, for instance, that many heart conditions were not genuine; they exhibited all the surface symptoms, but were not heart ailments at all. They were, I discovered cardiac neuroses, pseudo-anginas, with deep-set emotional origins. Skin rashes, stomach ulcers, and other things I need not frighten you with, had reasons for existence in emotional and nervous factors. Here was a fascinating and difficult field of medicine in which the surface symptoms must be taken with cautious cynicism.

The half-guessed, half-charted forest of the mind entranced me; there was little urging needed to make me shift to the neurological field. I was still hunting the cause, you see, of physical and mental sickness. After some years of neurological and psychiatric work I began to be aware of a larger laboratory. Out in the working world there were thousands upon thousands of men and women who lived in unnecessary misery, patients who never got within reaching distance of a hospital. It was a field in which hasty diagnoses were being made, where sick people were being discharged and made miserable when all they needed was a bit of medical advice and help.

I saw then that my job and my work was to do what my training permitted in relieving the unjust and unnecessary pain which maladjusted mental factors can bring upon all of us. Thus I entered industrial psychiatry, and the pursuit of that aim has brought me before you to discuss safety, a topic directly important to both of us.

It is important then to bring out as clearly as I can the meaning which "safety" has for me, its meaning to me as an industrial psychiatrist and as a responsible human being.

To a psychiatrist the individual appears as a self-sufficient unit; he is not merely a cog in the industrial machine, a check number on a payroll. The whole of his life is viewed as a working, breathing unity, a unity which comprises mental, physical, emotional, cultural, social and economic aspects. Any factor whatever which threatens the sweetness and mature synchronization of all those aspects is a threat to the "safety" of the individual concerned. According to my lights, every honest citizen has the inalienable right to a fully rounded life of satisfactory work rising gracefully to a mellowed old age.

Now such a definition of "safety" is, I know, a broader one than that contemplated for the purposes of this meeting, but from years of observation I am certain that many of the causes of maladjustment and physical accident and disability rest in just such a broad panorama. There is the miracle of the body, that it breathes and dies; there is the miracle of the mind, that it thinks and acts; and there is the miracle of the emotions, that they direct and condition both the mind and the body.

The narrower definition of physical accident is included in this larger definition. Accidents, except for those arising from the cussedness of machinery or from the physical environment, must of necessity come from a weakness or maladjustment in the victim. Bring mental health to the employee, place him where his abilities fit, and we who are responsible for the lives and bodies of our workers shall have a measure of control over the dangers of industrial life which now seems unbelievably improbable. So, my discussion will deal necessarily with the emotional causes of accidents, the threats to "safety" which arise out of misdirected and maladjusted emotional currents and situations.

It is axiomatic that if there were no human beings there would be no accidents. The individual contributes 95 per cent of the factors necessary to make an accident. "You can build a guard rail around a hand saw," says Doctor Forster, "but you cannot fence off mental attitudes." Some eight out of ten accidents are preventable if the psychological factors are controlled. Even you people who sit in front of me, for instance, represent to me, the materials for a thousand accidents. You are tons of dynamite sitting there, waiting, should the mere physical conditions align themselves properly, to blow safety sky-high and to glory. You are a million foot-pounds of destructive emotional energy ready to bring about a catastrophe at any moment. What restrains that energy? What channels it into the excellent work for which you are noted?

There are no easy answers to any such set of questions, for the emotional causes of accidents are deeply hidden. One must see the individual life as a whole in order to gauge the emotional maladjustment. The psychiatrist must interview the employee personally and in the flesh. He must probe gently and classify carefully all of the data at first hand. Psychiatry is the final filter of diagnostic medicine.

Causes deep in the private life of the worker may bring about in their logical sequence accidents which are completely unexplainable on the surface. Fear, worry, hunger, illness, psychological unrest, fatigue, and boredom cost many lives. Anger, irritability, bravado, showing-off, exhibitionistic horse-play, group hazing, perverseness, and childishness all take a toll in human accidents. To reach the cause of these and to compensate for them, requires the whole picture of the individual and not merely that aspect of him which is uppermost in an industrial plant.

Take for example a case presented by Dr. Hart Fisher, Chief Surgeon of the Chicago, North Shore and Milwaukee Railroad, at the Chicago round-table conference on industrial psychiatry in May, 1939. X was a young boy who, regardless of the position in which he was placed, immediately would have an accident; with change from one department to another, his accident record continued. He was a constant repeater. In desperation he was given a job which any fourteen year old child could do: he was placed as a helper for a night-watchman

in a steam plant. But after one night's work there, when he was chopping wood to help the watchman, a piece of wood flew up and struck an eye and he lost his eye.

At an interview the boy was asked, "Why are you any different from your two brothers who work for this same company? You came from the same mother, the same father, the same environment. You have had the same training, and still they are exemplary employees and you have an accident no matter where they place you." Well, the lad was physically all right, he was normal and fitted for his work. There was nothing on the surface to account for his accidents.

An examination was made then of his home environment, and the fun started. He was happily married and declared that he loved his wife and she him. "Well, then," he was asked, "there can be nothing wrong there. Have you got any worries?" "Only one," he replied. "When I got married a year ago, I borrowed one hundred dollars from a loan shark." Remember now, all these accidents occurred within that one year period. Although more than one hundred dollars had been paid back to the loan shark, another hundred had mounted up in interest, and the threat of garnishment was being held over the lad's head. One of the company attorneys talked forcefully to the loan shark, and the obligations were cancelled.

In the eighteen years that followed X had not a single accident. In that single dangerous year that boy was a repeater, an accident-prone individual who endangered not only himself but all those who worked with him. But look at the cause! The source of danger was not in the plant itself; no safety engineer, however conscientious, could have aided that boy by placards and safety meetings. He was emotionally sick, sick enough to cause an accident, but not sick enough to visit a doctor or go to a hospital for observation. Yet the danger he caused was a very real danger—and a man killed by a non-gun or a cannon is still undoubtedly killed and done for.

So, there is the need for the general approach, the broad picture, the complete life. The causes of accidents are quite often emotional; no worker ceases to be a parent, or a lover, or a dreamer, or a hater, or a craven merely because he dons a pair of overalls. Emotions cannot be changed or rubbed out by an appeal to reason; their

driving power comes from deep pressures within the mind, and mere logic cannot touch them. Apparently unrelated causes may bring about serious accidents. There is more between the size of a grocer's bill and a broken leg than the average industrialist's philosophy may yet have dreamed of.

From my point of view, then, what are the basic requirements for an accident? I can simplify my answer by limiting the personal factors to two, each present in varying intensity.

The first of these is the lack of physical co-ordination, the jam in the muscular control, the slow reaction time through which the individual fails to assess a situation and move in time to avoid an accident, the slowing up of physical response in a set routine.

The second basic requirement for an accident is inattention, perhaps the distraction which an alien emotional current sets up so that the job in hand loses focus and full meaning; perhaps the intrusion of a feeling of distance and unreality which maladjusted emotional factors bring about; perhaps mental and emotional preoccupation—but at any rate, inattention.

These two factors are basic; if one takes for granted that the management has taken all proper safety precautions, then these two account, probably, for all accidents. The presence of either or both of these is a constant source of danger; if any preventive safety work is to be done, the affected individuals must be detected and treated *before* the accident or another accident occurs. The surest indication of the presence of these two factors is the minor accident, the cut finger, the damaged machine.

With some people these two factors are always present. Such people are "repeaters," the accident-prone. They form a more or less constant group. That accidents happen to this group and not to other groups is a logical result of the underlying causes which distract the attention and destroy physical co-ordination.

It is interesting to note the distinctions which some of the automobile insurance companies make among their policy holders. "Safe" drivers are often given a preferred rate. In a study of five thousand drivers in Connecticut, six per cent of the drivers had contributed some seventy-two per cent of the accidents. These people were judged by Dr. Walter V. Bingham (who made the

research), as being almost certain some time to be involved in a fatal accident. They were repeaters, the accident-prone drivers. And incidentally that survey was frustrated by the lack of authority to enforce the six per cent to undergo psychiatric examination. Industry has better control and a better chance to examine these repeaters.

These are the two basic requirements for an accident, then; the lack of physical co-ordination and the lack of attention. With their deep-set emotional foundations they constitute the sign and signature of real and potential accidents. If we are to prevent accidents and not merely mop-up after them, these two factors must be detected and removed upon their first appearance.

Luckily there are many clearly recognizable psychological types which exhibit these two basic requirements for an accident. My first group for discussion consists of rather obvious types, but even with these obvious types one must be vigilant. Employees a long time with the company may develop, unnoticed, into one of these types, and not be discovered until an accident brings them out into the open too late. Safety and medical men must keep their eyes open for the appearance of the incipient stages, and when detected these workers must be removed from jobs where their lack of control may endanger their own and other lives.

1. The epileptic is a perennial problem in safety. Do what we will, they will pop up in responsible positions where a seizure will cause an accident. And a major seizure means loss of consciousness, muscular contractions, and an almost instantaneous loss of balance. Even when free of a seizure the epileptic usually has poor concentration, and his illness makes him lose direct contact with his job. The threat constantly hanging over him brings fear and a loss of confidence. In most positions, he is, in all charity, unfit.

2. The late syphilitic constitutes a direct threat to safety. The two basic factors are present in full force; there is lack of motor co-ordination and also a mental deterioration—a general paresis. Venereal control campaigns by compulsory blood tests have in recent years reduced the incidence of the later stages of syphilis in industry. And by this time many symptoms are so readily noted, even by non-professionals, that accidents arising from this group have been lessened considerably.

3. The pre-senile cases, those where the defects of advanced age are present in a relatively younger age, are sources of embarrassing problems. They do represent, however, our two basic factors, and are hence accident-prone. The shifting to other jobs constitutes a neat problem in fact, as most of you know, but firmness is in the long run a real kindness.

4. High-blood-pressure sufferers exhibit quite clearly the accident characteristics. Before the cerebral break they are most often irritable and inattentive. After the stroke, of course, there are distinct physical halts and mental vagueness. These cases are not difficult to recognize medically; one of the best things a supervisor can do is to refer all instances of vertigo to the medical officer.

5. Feeble-mindedness exhibits both of the accident factors very clearly. The muscular reactions are vague and illogical; the attention and memory are easily distracted. These cases should never be permitted to work with or around moving machinery. They are walking accidents looking for a place to happen; they have a logic all their own and one which rarely takes physical forces into a full accounting.

6. Chronic-alcoholics are another clearly recognizable instance of the accident-prone. The ever-present threat of a green bile hangover drives the alcoholic into continued attempts to paralyze his nerves and his stomach muscles. His reactions are furred and out of focus; mentally he has lapses into forgetfulness and irritable rage over trifles. He has all the requisites for a splendid accident; look out for him or he'll have it in one of your plants. When you can afford it, send him away for a cure, but, executive or not, don't keep him as he is.

These obvious types are, of course, more or less automatically excluded from positions of responsibility where their lack of control may be a source of danger. But there are other individuals so close to the normal that the detection of them must many times come, unfortunately, only from the consequences of their defections. These more obscure types suffer from the commonest of human ailments, the emotional upsets which impair efficiency and limit us to one great man a generation. By some chance they have come to have exaggerated forms of our normal traits. They need sympathy. There is an old adage, "Look

in your heart and write," which might be changed to, "Look in your heart and listen," in order to be the perfect principle for those guiding the safety of millions of employees. And human sympathy and human understanding will solve problems even wider than those of safety.

1. The manic depressive you have all met, even though you may have recognized him under a less oppressive title. He is the most human of men. Praise him and he flies to the sky; criticize him and he mopes in the depths. He is the cyclic individual with either the up or the down cycle predominant. The up-cycle lad is gay ninety per cent of the time; he laughs too readily and reacts too swiftly for us pedestrians. Usually we like him and get along with him quite well; his ten per cent depression period seems somehow engaging and amusing to most of us. But believe me, he is a dangerous fellow; his moods shift too swiftly, his muscular reactions are like lightning, and detail baffles him. Trust him only in jobs which have variety and swing to them; never trust him in the monotony of detailed routine. His first cousin, the down-swing manic, is ninety per cent of the time depressed and unhappy. He is hard to get along with, and he thinks slowly. He loves detail and does well on routine jobs. Less prone than the up-swing manic to accident, he must still be watched in his ten per cent up-swing, for he lacks the skill to take things in the rapid sequence which his temporary mood requires. With sympathy and understanding neither of the two manic depressive types need give rise to accidents. Unless they have already been involved in an accident, the handling of them can be left to the personnel department. Sufficient for the day. . . .

2. Then there are the day-dreamers. For them we have the sympathy we usually reserve for children. They are the Miniver Cheevys of this world who "Miss the medieval grace of iron clothing." They find in the turbulency of their inner imagery an adequate substitute for participation in this stubborn world of factual and economic barriers. The dreamers fit not too well into our industrial civilization; they are constantly being jerked into the present by the inexorable demands of a practical and non-mystical people. Their thought is always turned in, and never, or rarely, toward the specific job to be done. Perhaps I set an impossible

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task for you, but to prevent accidents from these people one ought to keep them on the jump, to keep them from having time to go wool gathering. Action and a chance to dramatize themselves will keep their attention on the job and permit that excellent inventiveness which is typical of all dreamers to work productively. Only through lack of attention are they accident-prone.

3. The chronic worriers form another group which shows the two accident characteristics of lack of proper co-ordination and lack of sharp attention. They *anticipate* accidents, and by that mental line-up set their muscles and their attention so definitely on a coming misfortune that they often encourage it rather than fend it away. The back-seat driver is a homely example. At every tight place he contorts his muscles, shrieks in dismay, and makes some involuntary move to take over control of the machine; some day he will anticipate an accident by creating one himself. The worrier also suffers in retrospect; he loses his nerve. Past narrow escapes upset him so much that he has a tendency to duplicate the situation and to provide a more dramatic conclusion. These worriers should be drilled to a set routine wherever possible; when an emergency comes, habit will then take care and calm the worrier. The worrier is always relieved by certainties. What he cannot stand, and what makes him accident-prone is the *possibility* of something unpleasant happening to him; quite often he is a good soldier when he knows, if you will forgive the figure of speech, what music he has to face.

4. The crippled-personality is another accident-prone person who eludes detection except by the trained eye and a laboratory check-up. He is the person suffering from any disease or deficiency—heart ailments, deafness, gout, chest conditions, endocrine insufficiency, or others. These people make a mental compensation to fit their physical ailments. They are separated in their own minds from the average employees; their illness is a basic factor in all they think or do. A vagueness clouds their actions, and in many instances the defect which would not rule them out of performing their jobs is turned into an obsession which will. Alertness and normal reactions vanish—and the accident occurs. Medical treatment and out-in-the-open discussion will be a corrective, and in time the crippled-personality will be-

come, as no doubt you have often observed, moderately proud of his ailment. But then, we would rather have a human bore than a human accident, I'm sure.

5. The lonely personality is a much more diffuse case of inattention. The lonely man tends to become dissociated from his work and his fellow employees; he lives in a somewhat bitter world of his own making, and views even his job from the other side of an emotional Grand Canyon. The source and cause of his loneliness rests almost always in his private life. It may be a geographical factor: a childhood spent in the open plains with their long, empty vistas, or in the separateness of big mountains, will often enough leave the grown man reluctant to enter the spirit of a big organization. Poverty, again, may leave scars upon the adult personality. Membership in the minor religious sects sets a man apart, and sometimes the memory or the presence of pathological parents prevents the grown man from realizing himself in his work. Whatever the cause of the loneliness, two types emerge; those who linger at the edge of the crowd wistfully hoping some one will invite them to join in; and the others who have an admixture of melancholia in their loneliness and *will not* join. The second group *only* needs attention here; these will become schizoid and dangerous from a safety viewpoint unless some well-thought out program is conducted to win them to an inclusion in the life of the organization. They react well to this type of responsibility.

6. The paranoid personality is a suspicious fellow who reads dark motives and fell plans into the simplest of actions. He trusts no one and suspects everyone; thus he brings an element of unreality into the normal functioning of the industrial organization, and thus violates the basic rules of accident prevention. Such a person must at all costs be removed from any supervisory position, for he breeds resentment and unreality, thus endangering not only himself but all those under his direct command. He lacks any decent objectivity, and visits his family, social, and religious irritations upon his fellow workers.

These are the types, then, which show most clearly the primary equipment for an accident. They are lacking in clear emotional and physical action; an alien element obtrudes itself upon their good sense, and their physical reactions suffer. Of course, I

am well aware that the mere recognition of these types among the employees is only the first step toward safety measures, but that first step and the sympathy it involves is of great importance. Once the problem is clarified, the solution becomes humanly possible.

So far we have been discussing types of personalities, but there are also situations which give rise to our two requirements for an accident; inattention and lack of co-ordination. One must always remember that an unusual situation or an irritating dilemma gives rise to emotional stress, and under emotional stress the average personality becomes abstracted and loses co-ordination among mind, body and the job.

The first grouping of situations are so familiar that I need only mention them briefly.

Physiological fatigue arising from under-nourishment is more common than a well-fed executive might at first imagine. Large families living on a small budget are apt to be somewhat erratic in their eating habits; poor food and the worrying about it bring employees far below a safety standard. For this situation I have no solution, unless it be the installation of free lunches.

Mental fatigue arising from long periods of concentrated work is another and very common source of accidents. Rest periods and change of pace would aid greatly. In some heavy industries this cause is clearly recognized by having alternate teams which perform on the job for a short period and then are relieved by the other team.

Then there are the hard, unyielding supervisors, who drive their men callously, and who take resentment of the employees as a sign of full-swing production. These, praise be, are becoming a rarity. Another type of supervisor, unfortunately, is becoming more common—that of the superior who has become all mental, whose viscera reacts sluggishly, and thus keeps him from maintaining a sympathetic understanding of his employees. I quote without comment from Professor J. A. Melrose, who lectured at the 1930 National Safety Congress: "We have gotten so heady in our civilization and think so much of our intellects, that we have lost our viscera. We lose our punch when we lose our viscera, because, this after all, is our power machine."

Financial difficulties take a toll of the worker's co-ordination and attention. Few

men can work well when they are beset by financial devils, and during a period of distraction and worry accidents may occur. Usually these worries diminish when one talks them over with another person; supervisors and personnel officers must take this too common ailment into their accounting and set up aids of financing plans and educational discussions.

Employees quite often attempt to carry on their jobs while suffering from temporary shock. A death in the family, a broken engagement, a fire, or what-not may put a man into a temporary daze. Wherever possible the supervisor should see that the employee does not work at all while in this condition. The few days of inaction will pay dividends in increased efficiency and freedom from accident.

The second group of situations are not so readily treated; they are worth a more extended exposition than this limited time period will permit. I offer them to you for real consideration.

There is the problem of beginnings: every time the worker is brought into a new set-up he must build anew the muscular and mental and emotional co-ordination which spell good work and safety. Whether he is a green employee or a transferred one, the danger period ensues. On the physical side this hazard has been accounted for, but the emotional adjustments have more often than not been left to chance. The importance cannot be too heavily stressed; safety depends upon a decent morale. The new man must be made to feel at home whatever means are used.

Again there is the problem of endings: the old employee close to retirement age presents a real hazard; his habits are set upon old models; his claim upon sympathy and past record sets up an arrogance difficult to control; his jealousy of younger blood and his failing co-ordination take away the edge from his abilities. Tactful handling will prevent any accident to him, but what of those who work alongside him?

There is the problem of the early thirties: for some reason, especially with women, the thirty year mark presents an emotional hurdle. At that time both men and women are emerging into a new civilized adjustment; the home shackles have been broken, the emotional drive of youth is waning, and the sober responsibilities of full adulthood have not yet been crystallized. It is a period

of emotional indirection and possible melancholia. The unrest is apt to carry over into the employee's work and create a safety hazard.

There is, again, the problem of group exhilaration: workers react definitely to their group feeling and indulge in exhibitionistic horse-play, hazing, and impromptu histrionics. They wish to realize themselves in the approval of the group, and any exaggeration of their normal actions and qualities will be indulged in to secure it. The horse-play is an unconscious compensation for the emotional drag of a settled routine. The exuberance and exhilaration must be channeled into safe usage. Horse-play accidents are much too common.

Finally there is the problem of menopause, both male and female. The period comes somewhere in the forties in females, with forty-five as the reckoning age! In males the change occurs between the ages of 50 and 60, with 55 the usual age. The emotional stresses of the menopause are well known in females, but in males, also there is a psychic menopause which disrupts their settled habits and creates a mental condition that encourages inattention and non-co-ordination.

These then, are the sources as I see them of accidents arising from emotional factors. If I may, I should like to indicate a few more general considerations in handling the emotional problems.

1. I would suggest that all accidents of the past several years in any one organization be analyzed for the appearance of these types and situations. Accidents, as you know, have a most uncanny way of happening in the same place, perhaps the constant in many of them is an emotionally maladjusted worker.

2. I would suggest again, that all near accidents be reported and analyzed. In that way the repeaters and the accident-prone may be checked and eliminated before the damage is done. This procedure would add more work to the safety department and entail considerable education work among supervisors, but an honest trial might be worth the effort.

3. Wherever possible the attempt should be made to fit the type to the job and not the job to the type. Entrance examinations will provide some material for judgment, and personnel officers can, with medical aid, turn in a list of suggested changes at stated intervals.

4. I would suggest a closer examination of the cases of extreme fatigue. Here the supervisor or the foreman must be on the alert to anticipate fatigue before the danger period sets in. A reasonable set of rest periods, together with physical examination of extreme cases should reduce the physical and emotional dangers.

5. Relaxing factors should be included in the physical set-up of the plant. Attractive rest rooms and recreation halls are in wide usage. Group games, rivalry by departments, free lunches, libraries build morale.

6. Last, and most important, I would advise the employment of a competent psychiatrist whose office would be a sort of emotional no-man's-land, or "zone of neutrality," in which the employee's confidence could be more readily won. In smaller companies, the service of a psychiatrist could be spread among a group. At the very least close connection should be established with the local hospitals and with nearby country sanatoria so that adequate care and rest may be obtained. Rest and ease of mind are the greatest protections against accident.

Before I close I should like to re-emphasize an earlier point: that of being certain to keep in mind the whole unified picture of the individual worker. The industrial is only a part; back of it rests the mental life, the family pressures, the local environment, the social class, and the currents of our total civilization.

Safety, again, as I see it, is a sign of positive co-ordination, a sweetness of physical and mental health, the adaptation of a twentieth century adult to his industrial environment. It is extremely important to remember that all of the environment must be considered, for man lives, breathes, and works as a unit. Safety is a humane consideration and a grace accruing to a really decent civilization.

THURSDAY MORNING SESSION

October 19, 1939

Foremanship Training—the Fundamentals and Effective Methods Involved

By GLENN GARDINER

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We have an interesting subject. It is an interesting and important subject, right at this time above all other times in our recent industrial experience. We mustn't deceive ourselves about the importance of this man we are talking about—the foreman. His function has always been an important one in industry; it has not always been recognized completely. It is coming into greater recognition, however, and we are realizing more and more that only as we prepare and equip our foremen to do the job that we expect of them, can we hope to get the kind of industrial relations results we want.

In recognizing the importance of the foreman, I hope that management isn't going to overlook too much the fact that an important function deserves important compensation. There are some evidences in certain parts of the country that foremen as a group are not entirely satisfied with the recognition they have had from management. Management continuously talks about the importance of the foreman and his function; but I am afraid management hasn't always fully recognized how much that important function is worth on pay-day.

When we delegate heavy responsibilities, we like to be able to delegate commensurate authority. I think that the foreman himself in these last several years has begun to wonder if something hasn't been happening to his authority. He is beginning to wonder how he is going to get the results expected, when he is subjected to certain limitations of authority by reason of new labor policies, new labor legislation and new methods of bargaining and dealing with labor.

One thing we must recognize, however, is that no matter how conditions may have changed, we still must have from foremen at least as good results as ever before. We hope we can go on getting better and better

results through the effective performance of the foreman's functions.

In approaching my subject, I should like to point out that there are three major functions of foremanship under today's conditions. The first of these concerns labor relations, the second community relations, and third, the foreman as an interpreter of business facts.

A Labor Relations Man

In the first place then, let's consider what is today the most important single function of the foreman. That is, his function as a *labor relations man*.

Not so many years ago, the question of personnel, labor relations, employee relations, or call it what you will, was recognized as a managerial function that needed to be taken care of. Companies began to set up personnel departments some twenty-five years ago. During the period of the World War and immediately following, this personnel function blossomed and expanded. Many companies had large personnel departments, and they were measuring their employee relations on the basis of the extensiveness of the personnel program activities they were carrying on.

I think that for a period we were too much impressed by the belief that if we set up a personnel department, the personnel department would just naturally take care of this whole question of employee relations. We thought that we could delegate to a personnel manager and his staff, the responsibility for good employee relations. There was a tendency at that time to take away from the foreman and to centralize such functions as hiring and firing. There was a tendency to encourage employees to take their grievances over the foreman's head to the personnel department.

Well, I think we have learned something

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in the more recent years where good labor relations really originate.

We have learned that good labor relations originate right at the point where the employee has his contact with the company. We all know that this is *with his immediate boss, foreman, or supervisor*. Regardless of what our personnel activity program may be, there is at the same time, traveling right along beside it, out of sight, unmeasured, uncharted, the *real labor relations program* based upon what individual foremen are doing from day to day in their contacts with their people.

That relationship is building up at that point, regardless of what else we may do, regardless of what we may do in the front office, regardless of whether we print our policies in attractive form and distribute them. It still remains that it is the personal contact between the foreman and his men that establishes the relationship we are developing with our labor force.

Now, don't get the idea from what I have said that we should throw the personnel department "out the window." No, I think it has an even more important part than it has ever played before in coordinating many of these labor relations activities and equipping the foremen to discharge them. It can help the foreman with the kind of information that can be furnished from a staff research servicing point of view. But we must recognize all the time that labor relations are actually being built up for good or bad by the foreman himself.

I am afraid that sometimes personnel departments are a little jealous of their prerogatives. They will do a much better job for their companies if they will recognize themselves as a staff service organization, accomplishing their good results through the men at the front, the foremen. They should be less concerned over who gets credit for satisfying "Olaf McKosky." They should see that he is satisfied at the hands of the man who is dealing with him every day.

Because the foreman is so important in our present-day labor relations scheme of things, I think it is highly important that we consider seriously what we can do from management's point of view to train, develop, and equip him to "handle this basket of eggs" that he carries for us, because our labor relations eggs certainly are in his basket. If we don't smooth his path and

help him so that he won't stumble with the basket, we can look for unsound labor relations in our organizations. Every foreman, today, must be a *positive human relations asset*, not just a trouble dodger.

It is not sufficient for a foreman to be able to say, "Well, I am getting along swell. I don't have any squawks. No one kicks about the way I am handling things. I don't have any rebellions in my department; everything seems to be all right."

That is not enough. We have to go beyond that, and never be satisfied with relations as they are, but continuously make them better.

A Community Relations Man

The second function of the foreman that I want to speak of is his function as a *community relations man*. Now, just how does a foreman figure in that picture?

In a country where democratic processes prevail, where we have a free press, and free speech—which we fervently hope will never be denied us—it is inevitable that public opinion becomes the court of last appeal in all matters affecting the public. We have seen a good deal in the past few years of the effect of public opinion upon industry and the growing recognition of industry and management that it has to regard the public and its opinion very seriously.

Public opinion, as far as a company is concerned, has certain national aspects, if the company does business on a national scale. But I also think that public opinion is peculiarly important to every company, regardless of the geographical scope of its activities. Public opinion is important in *its own community*, the community in which it operates and in which its employees live. We would not have any great public relations problem in industry if every company took care of its own neighborhood community opinion.

Now, why is the community opinion important to your company?

There are a great many reasons that I could advance. Take just one, for example, the matter of *local taxation*. How often do people, not related to industry itself in the community and who do not recognize the extent of their own dependence upon industrial institutions, develop the attitude that "these big companies can take it." We

know of instances where companies that have not been fully appreciated by the community have literally been taxed out of the community. In some cases, they have been taxed out of the state.

Well, industry is beginning to recognize that those things don't have to happen in any community, if their local public realizes the truth about their operations. Of course, certain companies need to do a little "house-cleaning" and a little "renovating" to prepare to stand the spotlight of community opinion.

I think the extent to which the public has been misinformed about the real American industry is rather woeful. But that is being rapidly corrected, I am happy to say, in this country. The public generally is getting better and better acquainted with how industry operates.

Community opinion is important to your company because of its effect upon the labor mind. In your own industrial community, which plant is visited first by the best men looking for jobs? Why, of course, it is the company with the best local reputation every time. How valuable it is to a company to enjoy a favorable community opinion that will bring voluntarily to its doors the best type of man to sell the best kind of labor!

In many other respects, what the community thinks about your industrial enterprise is going to determine what kind of a "break" you will get in many situations arising in the community. Now, you say, *where does the foreman fit into this picture?*

Well, let's look at the foreman. Suppose he has twenty-five men under him. Every one of those men enjoys a certain sphere of influence, let us say, in the community in which he resides. How wide his sphere of influence is, anyone may guess. It may be only his family; maybe those are the only ones who take him seriously. But we may assume that he has a sphere of influence of ten or a dozen people in his lodge, in his club, in the block in which he lives, the fellows he goes fishing with, the fellows that he associates with outside of working hours. What his wife says to the neighbor's wife about how he is treated at the plant is a factor also.

Let us assume the average man has an influence over ten people. That means that every time this foreman's twenty-five men

go into the community at the end of the day's work, they have potential influencing powers over not fewer than 250 people in the community.

You don't have to multiply your foreman by very many to see what a large amount of the population can be directly affected, very quickly affected, by what those twenty-five men think, feel and say about the company where they work.

Now, who influences them to say what they say? Not the general manager up in the front office. They haven't seen him more than once or twice in the last year. It is the man who immediately supervises them on the job, the man with whom they are in constant contact. We all know that the foreman is "the company" to these men. Each man goes out at night prepared to "sell the company up the river or down the river" according to the treatment he has had.

A Potential Sales Force

I think we have "missed a bet" in connection with this potential sales force that we have in our employees as far as selling our company favorably or unfavorably to the community in which we operate. The foreman has a very, very important part, I say, in determining what kind of a reputation your company enjoys in the community.

In some countries the best minds have gone into the military forces. In some, the best minds have gone into statesmanship. In America, our best minds have gone into the development of this country and its industrial enterprises, business enterprises. Industry, your company and mine, represent, in my judgment, as high an order of human organization as modern civilization has developed, although subject to all the frailties common to human nature, and subject to all the possible frictions that develop where human beings come into contact with each other and do not always "click."

I think that if the general public realized how earnestly thousands and thousands of leaders of industrial enterprises, like you men of industry here, are trying to meet these problems and improve the situation, we would get a type of response from public opinion which would tend to elect to

office men who have a fair attitude in appraising industry.

This whole question of public opinion begins right at home. What the fellow at a distance thinks about you may not mean anything, because he hasn't heard of you. What the fellow next door thinks of you in your own block means a lot, because your dog has been digging up his tulip bulbs, your kid has been shooting beans at his window, and you have been rubbing elbows with him.

That is the way in industry. Your community is conscious of your presence and is forming an opinion of you. That opinion is very important to the future of this country. If we are going to maintain in America democratic processes and democratic types of industrial organization, it has to be done on the basis of deserving a favorable community opinion.

A Community Influence

We can go a step further in describing the foreman's place in the community. I am one who shares a belief with most of you, I think, that what a man does off the job is his own business. We have no right to interfere with that. I believe, however, that that picture changes when a man's status is raised above the level of the ranks. The company which has it within its power to affect the status of a man in the ranks and make him a foreman, has affected his status not only on the job, but has affected his status in the community.

Believe it or not, the foreman is a pretty important individual in the community in which he lives. People look up to him. He is somebody to the rank and file of the public in your community. He reflects, whether he realizes it or not, favorably or unfavorably upon your company in the community.

I know an industrial town where they have a foreman's club. The foremen from one of the companies there always come to the meeting "half tight." They almost break up the meeting. They have a swell time, but they are disgusting to the rest of the men, because that doesn't seem the time or place to celebrate in just that way. They have become known as "that drunken crowd from such-and-such company."

It seems to me that those fellows are overlooking an obligation to the company

that has affected their status and raised them to a place of importance. I think we have some right to expect from the man whose status we have partially created, that he will recognize that he has some responsibility in his community in the direction of establishing a personal reputation that is not detrimental to his employer.

An Interpreter of Business Facts

Now, for the third point in the foreman's functions. That, I think, is as an *interpreter of business facts and information to the men under him*. He has an opportunity in the course of the day's work, in his contacts which come up in a natural sort of way, over days and over weeks, to establish a sounder and sounder understanding on the part of his men as to some of the business facts and problems which confront the company and limit many of the things it might be able to do for employees.

Naturally, the foreman is going to be able to interpret these things intelligently in his day-to-day contacts *only if he is first informed*. He can't sell something that he doesn't have. We have an obligation to him. We expect him to stand among his men as some sort of a leader in more ways than technical ways. If he is going to qualify, we take some responsibility for giving him the kind of information necessary.

There is a great deal of "cock-eyed economics" and misconception abroad regarding many of the things that affect business, like the theory that unemployment could be solved overnight if we legislated a maximum thirty-hour week. The theory is that if you haven't enough work to give forty hours to everybody, you cut it to thirty and the problem is solved. You never heard that proposal, of course, without the accompanying suggestion that the same pay will be given for thirty hours that was formerly given for forty. Automatically and immediately, the hourly wage is increased by thirty-three-and-one-third per cent. We all know what that would do to producing costs and selling prices, and how it eventually would curtail buying and cut down sales volume and employment volume. Soon someone would say, "Apparently, that wasn't enough. Better go to twenty-four hours." You can carry that right down to the ground, if you want to.

There is a lot of "cock-eyed" information about some of these over-simplified solutions of these tremendously complicated economic problems of industry. There is the question of whether or not unemployment is the result of labor-saving machines. We can't go into that because time doesn't permit, but there is a lot of information that should be disseminated to foremen on that subject, because a lot of foremen themselves think that unemployment throughout the country has been caused by labor saving devices, without realizing that they have always created, overall, more jobs than they have eliminated.

We need to interpret to our foreman a great deal of common sense, every-day business information, if we are to expect him to do the same with the men down the line.

Foreman Training Methods

I have touched on three great fields of activity in which every foreman in industry necessarily must function. We have to equip him to function effectively. That calls for some definite, planned method of "raising the foreman's sights" to a level which will permit him to effectively perform those functions. He doesn't get it automatically. A lot of information has to come from management. Management has fallen down very widely, I am afraid, in getting interpretations of all of these things to the foreman.

I have been asked to discuss foreman training methods. I am not going to go into the details of the methods. I think it is much more important to get a picture of what the foreman's job is, and find, then, the most effective ways in your own organization to develop our foremen. Executives must be sure to get across to the foreman the necessary information and background with which to go ahead and do this job in the way that it has to be done.

Here are a few points about any training program of the foreman that I think are important. You must have participation of the executives up the line in one way or another. If they are not back of the program, and in some way participating, the foreman isn't going to take it seriously. The foreman takes his cue from the man above him and what he is interested in, just as

the man below him takes his cue from him. Therefore, we have to have top executives of management participating in some way in the development program.

We have the problem of the old-timer foreman, and the question of what we can do to revamp his approach to problems in the light of today's conditions. That is a serious problem. You have a lot of talent tied up in men who are not quite seeing this new approach to things. We can't afford to throw them into the discard until we have done everything possible to revamp the point of view of these men and open their minds to some of these newer attitudes and tactics.

The Young Foreman

Then, we have the younger foreman who is inexperienced, but who can gather experience much more rapidly if we will do something to bring to him the benefits of the experiences of others. That is a process of education. Education is only profiting by the experience of others. We have to do that for the younger foreman, and we have to be looking forward, also, to the man who is going to be a foreman tomorrow. You must develop in your program some help for the sub-foreman, the assistant, the fellow who will step into the foreman's shoes.

If we get the picture of what the foreman's functions and potentialities are, we shall find effective ways of doing the job to fit our own situation, so far as details of training are concerned.

We have said a lot about foremen and their functions, but the foreman cannot function any more effectively than management makes it possible for him to function. Water will never rise above the level from which it flows. We can't expect foremanship to rise to any higher level than the information upon which the foreman has to make his decisions.

I might agree very much with that famous preacher, Henry Ward Beecher, who once was supposed to have said to the janitor of his church, "If the congregation sleeps, go to the pulpit and wake the preacher." If the foreman is asleep at the switch, let's go to management and wake the management.

FRIDAY MORNING SESSION

October 20, 1939

Merchandising Safety

By ROY H. WARMEE

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Salesmanship is the greatest profession in the world! I see a question mark on your faces and perhaps rightfully so, for to this audience, safety is the greatest profession in the world, and that I can't deny.

However, we are not so far apart except that safety is a thing to be sold and, therefore, must be put across in the manner of all good selling—with dramatization, showmanship, personality and all the media at the command of a modern sales department. This I shall attempt to prove.

Salesmanship is vital in every phase of life. Every successful man has been and is a good salesman.

When a baby yells, he sells his mother an idea. A fellow falls in love with a girl and the first thing he does and continues to do during the period of the courtship is to sell her the idea that he is the biggest bargain in her life. If he's a good salesman, he gets away with it; if not, he rings up "No Sale" on the cash register of romance and in comes another man—a competitor—to do a bigger and better job of salesmanship.

No man has yet gotten a wife unless his courtship and proposal contained all the elements of good salesmanship—drama, showmanship and personality. In other words, candy, flowers, honeyed words, best manners, best Sunday clothes, best disposition, promises and guarantees. In fact, salesmanship must never cease, even after marriage, if it is to be filled with happiness and few misunderstandings.

The first steamboat—and speaking about steamboats, I ran into this little jingle the other day:

Robert Fulton years ago
Said he'd make the steamboats go,
And he stuck to it.
Robert's friends began to jolly,
Called the steamboat Fulton's folly.
But the darn thing went, by golly—
He stuck to it.

The earliest train, the first typewriter, the cotton gin, the aeroplane, the radio, the automobile—yes, every new idea has to be sold to men against overwhelming odds of doubt and resistance before they can revolutionize our lives.

And so it is with safety. It, too, has to be sold. But after all, selling is so simple; it is only bringing people to see as you see, to feel as you feel, and to act as you would have them act. The formula is simple; only the method or technique is controversial.

Now, how can we accomplish all this? There is no short, easy lesson. There never is except using the elements in good salesmanship—persuasion, appeal to human motives and emotions, continuous education and suggestion, training and enforcement of rules and regulations.

Ripley defines salesmanship as the "Power to persuade plenty of people to pleasurably and permanently purchase your product at a profit."

Analyzing this, we get an excellent idea of what selling really is and the technique to follow, to get the results we are after. Persuasion, after all, is the best of all known methods to induce response and favorable action, with the least amount of friction. It obviates argument; it implies reason; it nullifies ego; it draws out unselfishness—all of which is sound selling.

The other word I like in that definition is "Power." Power to persuade, etc., that indefinable, unseen force, much like the steam in the cylinder that moves the giant, but is unseen, and as soon as we have seen it, it has spent itself and is no longer power. It is expressed in people in the form of a personality; in advertising, with color and illustrations. We find it in words and phrases properly blended in the appeals to reason, the five senses of men and their emotions.

In the word *profit* we mean benefits to the

individual through purchase or acceptance and, of course, in material goods and services; profit to the seller for effort expended and services rendered.

Father Raphael McCarthy, of Marquette University, said "It is a sound principle of mass psychology that the public will offer resistance to an order or injunction if there is a suspicion that the injunction is based on selfish reason."

This bit of sound advice should be in every salesman's handbook or manual. In the common language of the modern sales world, we call this selling benefits, which makes the "I" in the salesman subservient to the "YOU" in the prospect.

When we build a sale, we strive to get across these five important things and I name them only because every sound safety program must have these same things in it: (1) Yes Responses—create desire to do or to have, stating benefits to be derived by purchase or acceptance; (2) answer and overcome all objections which are common to all of us and in everything we try to sell; and (3) close with a call to action, meaning "Do it now."

Another slant on selling is to sell, as Elmer Wheeler puts it, "Not the steak but the sizzle." Another way of saying it—"Not the cigar, but the aroma." After all is said and done, we sell cosmetics for beauty, fuel for comfort, insurance for protection, and people buy pleasures, security, certainty, comfort, convenience, peace of mind and health; women buy for style and are slaves of fashion because of pride. We buy for gain, prestige and fulfillment of inner desires, all of which, when summed up, means we buy for happiness, pleasure and success.

These are what we call buying motives. They are, in fact, more than that. They are human reactions to human needs and desires.

Now, the fortunate thing is that safety itself is a basic buying motive; which should mean that the selling of safety should find a ready response in all of us; and to a large degree I think it does. For instance: tires are sold on a safety basis, removing the fear against blow-outs and accidents. Some investments are sold as safe things to buy. Aeroplanes still have the problem of selling people the idea that they are a safe way to travel, thus removing the

fears that beset the great majority of prospective customers.

They have not been alone in this problem, for this thing called safety has been the problem of every coal man, gas man, electrician, plumber and countless more, and it was the stock-in-trade of the old lightning rod salesman.

"Is it safe?" is a common query in everybody's heart, but unfortunately not in everybody's head. That's the difference.

Watching tiny infants grow, you see the instinct of safety and caution and fear. And what about the rest of nature? Isn't safety a prime instinct? I remember a school teacher who told the class "Let your head rule—not your heart." Or maybe it would have been better said, from the viewpoint of the professional safety man—"Let your head rule your heart." But the trouble with that is that everybody hasn't got the right kind of head, so that's where education and training, and even penalties must set in.

We are apparently given instincts by nature, but what to do with them seems to have been lost in our complex civilization. They are the products of our brains where we create destructive forces, releasing great energies which can be for good or for ill, and they can only be controlled by the same brain that conceived and brought them into being.

In our hearts we love an automobile, but we have to run it with our heads. We may even buy it to satisfy our pride, which is an emotion; but we must operate it with our eyes fully opened, our ears keenly attuned and our hands and feet alert to the impulses sent by a rational brain.

A case in point is stated by Prof. Frederick Lund, of the Psychology Department of Temple University, who said: "The chief cause of street injuries to playing children is not motherly neglect, but lack of playground facilities." No mother wilfully neglects her babies; her heart does not permit it; but it takes the brains of men to protect them by providing playgrounds, a job which rightfully belongs to the safety-minded men of every community.

All this indicates that in our selling of safety is the all-important thing of mind-training, which, of course, is a complete subject by itself. Training is also selling good habits for bad, right thinking for wrong, and the reasons for it all.

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Up to this point, I have tried to prove that safety is a thing to be sold or merchandised, as the topic indicates; it needs to be sold like everything else. Everything is sold and should have a technique which, when employed, in the most effective way, induces action and gets the best results.

Now in business, it is our duty to create impressions, everlasting impressions both in the salesman himself and in the customer. To do this, we must dig up the facts to make a complete story and we must present them with headline and color and repeat them over and over again with only an occasional change of dress. Repetition is the sole technique of effective training, resulting first in conscious action and later in sub-conscious or reflex action.

In the selling and the training, emphasis must be put on the impressions given through the medium of the eyes, for the psychologists tell us the human eye is twenty times stronger in its impressions than the ear. That's why we have blackboards in school, posters on the highway, movies, catalogs, descriptive literature with illustrations, and displays.

In business we seek to make purchases from us a habit. This is also the function of a safety program, for safety should become a habit—a definite part of good workmanship and every move that we make.

Now, those of us in professional selling realize only too well that sales education, whether it be to the salesman himself or the public at large, is not a one impression, one time affair, but that it is repetition, repetition, rehearsal, rehearsal, constantly striving to create unforgettable impressions on the minds of men.

This, too, is the safety job. Personally, I think you have done a grand job to date, mindful, however, that much remains to be done, and you are not or never will be finished, for new generations come and new and more difficult problems develop daily.

In that respect your job is no different from that of any manufacturer who has goods to sell or any institution that has services to render. They must keep everlastingly at it. Business history is replete with failures because they ceased merchandising and advertising and apparently were content to rest on past successes.

This, from my personal observations, has

not been the case of the National Safety Council. You have, however, been aided in no small way by many other groups and businesses that have used the safety theme as a part of their merchandising programs.

Three years ago Montgomery Ward combined merchandising and public education in safe driving, with a motor code that traveled the country. An advance man preceded the show to meet city officials, editors, Boy Scout leaders and other civic leaders, to solicit their cooperation. When they arrived in town a safety show was put on. In Jackson, Mississippi, Mayor Walter A. Scott summed up the attitude of the civic authorities: "I believe that this show, with its colorful performances, will do more to impress the minds of the public than thousands of printed words."

Do you recall what I said about showmanship and eye appeal? Montgomery Ward was performing a public service, acquiring good-will and at the same time selling its merchandise.

In and about Philadelphia for the past two school years, we very effectively have dramatized and lionized a little Scotch Terrier, called "Knee-Hi," under the direction of Dr. George E. Bremson and the sponsorship of Philadelphia's newspaper *The Evening Bulletin*. That dog is probably better known and has more little friends than any dog in history. He has given hundreds of safety demonstrations in the Public Schools and before civic associations interested in street and highway safety. A typical headline in the paper read "Knee-Hi breaks up street football." And one one of his many visits to the classrooms he found three little men on the blackboard of the second grade in Red, Yellow and Green named "Three Good Friends." Under each was written

"Don't dare move," says Mister Red.

"Stop and wait awhile instead."

"Careful," whispers Mister Yellow.

He's a friendly kind of fellow.

Mister Green says, "Hurry, do,

While no cars are coming through."

This is true merchandising. It appeals, it teaches, it leaves a strong impression on formative minds. I know from my own personal experience in my own home that Knee-Hi has created an unforgettable impression on the young minds of Philadelphia. Would that it were so easy to

impress the adult mind. In a recent editorial, "A Word to Adults," the same *Evening Bulletin* wrote "The schools have done a good job of educating the younger generation how to conduct itself in a high-speed motorized age, at least so far as walking is concerned, but the parents and the grandparents haven't learned any too well the lessons brought home by the youngsters. It's time for Daddy and Mother to do a little studying." I think we would be ungrateful if we did not salute the *Evening Bulletin* for its great contribution to Safety. And while we are passing out our bouquets, I am told that Knee-Hi is now in Washington, D. C. under the sponsorship of the *Washington Post*.

Another neat little bit of safety merchandising was put out by the Stanley Theatre of Philadelphia in the form of an "ad" which read "REMEMBER! Only Angels have Wings"; and illustrated thereon was a drawing of a traffic light, with under it the words, "Don't race against the lights and don't try to dodge automobiles even though you're in a hurry to see 'Only Angels have Wings.'" Clever!

Not many months ago I was impressed by an "ad" in *Printer's Ink* monthly. On the top of the page was a drawing of a boy about twelve with his arms stretched out, and behind him were a group of gay, laughing, romping children on their way to school. Beneath the picture was a jumble of fascinating letters and groups of letters that didn't make sense nor were they even pronounceable. Curiosity was aroused and I wrote to the *Cleveland Press* for the code which, when applied, spelled out "I always obey the safety rules."

I also learned from that letter that "Bizzy Bear," a comic strip character of their paper, steps out of his role with the beginning of each school year to preach and play at safety. Membership in the "Bizzy Bear Safety Club" carries with it rights and privileges that are dear to every child. A certificate of membership, a secret code, a paw shake or secret grip, all lend mysticism and enchantment to the idea.

But there is a serious side as well—six

simple safety rules that must be memorized. All candidates learn and obey these rules. Tiny tots have even come into busy editorial offices solemnly to recite the rules. But best of all, they put them into practice. Today there are 135,000 pledged members and Cleveland safety leaders say that the campaign has been a potent factor in cutting down the child accident and fatality figures in that city.

Congratulations, *Cleveland Press*! You are, as you said in the closing lines of that "ad," "More than a newspaper"—you are a power—power to do good.

And then there is the Shell Oil Company's crusade against screw drivers, with their "Share the Road" emblems, which when observed reduces stop and go driving 25 per cent. Their emblem has on it flags arranged in maritime code meaning "I am giving way."

All of this, every day in every day, is serving its purpose of selling safety and doing so with unfailing effect. It can't fail. Only, let's encourage more of it. It keeps the message of safety constantly before us in a diversified and clever way. It offsets bad habits with good habits; it appeals to the public through one of the great human buying motives or response motives—safety.

Selling is telling, and telling is selling, so that everybody can see and hear, and retelling so that everybody will come to know and not forget, telling so that it first becomes a part of their conscious mind and later sub-conscious in action.

Have faith in your product, the same as every good salesman must have. See the job as a selling job, the same as every salesman must do; and if what you have faith in and what you sell adds to the comfort, the convenience, the happiness and the pleasure of mankind, do not lose hope, but instead keep everlastingly at it. As with Fulton's steamer, let it be said, "He stuck to it."

In closing, this seems apropos—"Mary, why does Johnnie have to be told 20 times before he obeys?" "I don't know, I guess 19 isn't enough." And so it is with merchandising safety, and so it ever will be.

ADJOURNMENT

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