THE ABNORMAL AND TEMPERAMENTAL WORKER*

BY

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The years since the war have seen the development in the business world, as in other fields such as medicine and engineering, of a demand for more accurate and objective tools to deal with the human factor than those contributed by practical common sense and experience. This demand is responsible for the growing interest in psychological tests for the measurement of occupational fitness and for other short-cut methods that may aid in the selection of new employees. At first sight these methods appear to offer the solution for all the difficulties of the past, but increasing experience has shown that such methods are limited in their application, although undoubtedly valuable within their limitations, and that human nature is too complex to be reduced to a few simple components. In practice, success or failure at work does not depend primarily on abundance or lack of ability—that is, so far as measurable aptitudes for the performance of the task are concerned—but rather on the presence of other factors of a more dynamic nature that influence the total personality and the general health of the worker, and that interfere with the use of such abilities as he actually possesses.

Anyone who works with and studies large numbers of workers will find wholly inadequate that conception of vocational guidance that implies the possession, by each individual, of some special ability to do well some particular task, and that only in that one calling is happiness and success to be found. Actually, most people can do a good many things well, if they are sufficiently interested, have developed good work habits to apply themselves effectively to a task, are physically fit, know how to work well with people, and have a healthy attitude towards themselves and life's situations. Whenever failure is found, an analysis of its causes will bring to light far more complex issues than the mere inherent capacity to perform the task in question.

Essentials in Adjustment

Adjustment at work represents the major objective in all labour policies and in the various social movements and developments that characterize progressive industry to-day, but, in spite of the application of all these methods, individual instances of maladjustment still occur, and are probably increasing both in numbers and in importance. The adjustment of an individual to his occupational, domestic, and social obligations requires a congeniality, compatibility, and a harmonious relationship between the individual and the situation. In work this relationship is established when the individual is reasonably efficient, when he attains a reasonable degree of satisfaction from the work, maintains his physical health, and when his activities are conducive to the wellbeing of the social group of which he is a member.

A failure to achieve any one of these three objectives in work constitutes maladjustment. This may follow from a lack of aptitude for the work, from inadequate training, and from a disregard of adverse working conditions such as lighting, ventilation, and noise, although in modern factory and office buildings these problems have been largely solved. Where such conditions are adequately controlled it most frequently follows from an inadequate

emotional adjustment of the individual to major aspects of his life—to superiors, to inferiors, to family situations, and to the competitive aspects of industrial life.

The person whose emotional balance is disturbed for any reason whatsoever will express this not only in his relations at home and in his social group, but also at work. Inasmuch as his feelings and emotions are inherent aspects of himself, he carries them with him, so to speak, into every situation which he enters. Now since he has no understanding of himself, and actually shows an infantile belief in his own infallibility, it is not surprising that he blames the wage system, or the lighting, or the foreman for his own unhappiness and dissatisfaction with himself.

Manifestations of Maladjustment

The overt expressions of emotional maladjustments are multitudinous in type; for convenience they may be divided into those showing themselves in behaviour disorders and those masking themselves as illness, either frankly "nervous" or aggravating physical disorders and delaying their recovery. Perhaps the most common of all is the tendency to blame others for one's own failure: in the words of the old joke "everyone is out of step except our Harry." In such cases foremen, the wage system, the management, capitalism, and fellow workers may all be blamed in turn or together for the individual's lack of success. On the other hand, many of these cases manifest themselves as medical or absentee problems; they are the individuals who exaggerate every ache and pain, tend to stay out for inadequate reasons, and take an unduly long time to recover from physical disorders such as tonsillitis or influenza.

The worker who continually complains of being tired, sometimes to the point of complete exhaustion, is so well known that it is unnecessary to go into great detail in describing this symptom. The "tired feeling" may or may not have its fundamental basis in the physical condition of the individual. Like many other compensatory symptoms it is frequently a disguise for a more or less serious emotional maladjustment of the worker. The individual who finds himself handicapped by feelings of inferiority and insecurity, or who is unable to measure up to the standards of his work, tends to compensate in one way or another; one of the most common ways is through feelings of fatigue. This feeling of tiredness may be general or may apply rather to some definite part of the body, as the back, limbs, eyes, or that part of the body primarily involved in the performance of his work. These feelings and loss of function may become so serious as to result in a complete incapacitation of the individual for every kind of work. This is well exemplified in the following case.

A young man, aged 24, was seen on account of severe headaches coming on when he started work in the morning and varying very much in intensity according to his mood. He had been employed as a stock-clerk for over two years, and felt that he was in a "blind alley" occupation with poor facilities for promotion. He was walking out with a young lady who was very anxious that they should be married in the comparatively near future. At times she expressed herself somewhat forcibly regarding his limited earning capacities, and his headaches always became worse after a discussion of this type.

Physically, no signs of disease could be found. Examination of the eyes showed that they were normal and that there was no indication for glasses. A short discussion followed in which the production of symptoms due to emotional causes was pointed out, and the young man was advised to discuss his chances of promotion with his superior. As a sequel, his condition has improved very markedly and he now has a much better understanding of himself. The headaches, although occurring occasionally, are no longer incapacitating.

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Relation of Dissatisfaction to Sickness

For some years the Industrial Health Research Board has been conducting research work into the problems of industrial sickness and absenteeism in an attempt to isolate the various causes which may operate to produce this heavy drain on industrial productivity and individual happiness. With this object the Board has been provided with sickness absentee figures by a number of firms over a period of years. The rate used was the number of days lost through sickness per person per annum.

Where records are available for a number of years for the same organization there was found a general consistency in bulk annual rates, but there was a very great discrepancy between individual concerns, even where extrinsic factors such as security of tenure and working conditions were identical. In some cases the rate was three to four days per head per annum, while in other concerns rates as high as fifteen days have been found, this last high figure resulting even when firms are doing their best for the workers. When the figures are analysed according to the medical diagnoses the excess is found to be made up largely of disorders frankly labelled "nervous" or of rather vague troubles like gastritis, anaemia, and debility.

It is not contended for one moment that disorders thus described have no existence—they are known to all of us—but that when they occur in excess they indicate nervous troubles under these names, and are in reality escapes from unpleasant situations into illness. This process is not malingering in the accepted sense of the word, but an unconscious process occurring in an unstable personality who is unable to meet life's demands in an appropriate fashion. It is important to realize that the unfortunate doctor is never allowed to say that he does not know the "disease" from which his patient is suffering. When a man or woman is out of sorts and feeling unfit to work the doctor must give his disease a name, and in the ordinary way he has no control over environmental factors inside the office or factory where so much of the individual's time is spent.

Now it has been found by Professor Culpin, who has been investigating the problem of industrial sickness for some years for the Industrial Health Research Board, that the number of people in an organization who like and enjoy their work is inversely proportional to the amount of absenteeism. If 80 per cent. are satisfied with their work, the sickness rates are low; if only 40 per cent. are satisfied, the sickness rates are high, and there are in that organization a number of factors militating against industrial proficiency and individual happiness and health.

The problem may be compared to the parable of the seed and the soil. Under modern conditions of Western civilization, a considerable proportion of the population are emotionally unstable, due originally to faulty upbringing in their early years. But these persons are able to carry on fairly well provided that the "soil" in which they are growing is not too adverse, and that they do not get attacked by the "birds of the air" or "blight" in the shape of extrinsic factors in their domestic and social life. Now industrial organization has the power to modify the soil, and to see that it corresponds with accepted standards. It is unnecessary to mention the importance of daylight lighting, good ventilation, canteens, and rest pauses; they are now generally agreed to be part of normal industrial management among progressive employers. There are, however, more intangible but equally important factors that affect the problem of the industrial worker, and of these the most outstanding are: (1) the quality and type of first-line supervision; (2) the question of security and insecurity; (3) the problem of early initiation and training; and (4) the supervision of the physical and mental health of the workers.

Importance of Supervision

As regards supervision, some very illuminating work has been done during the last few years by Professor Mayo in the Western Electric Company in the United States. Constant observations under different experimental conditions were made on a group of five experienced girls engaged in the repetitive work of assembling telephone relays. Accurate records of production from instant to instant were made over a continuous period of three years. During this time various environmental factors were altered; rest pauses were introduced, and later removed; and hours of work were both shortened and extended. Throughout the whole investigation, and despite various changes, output rose steadily, and on the average was 25 per cent. higher than before the investigation. In the words of the investigators:

"A relationship of confidence and friendliness has been established with these girls to such an extent that practically no supervision is required. In the absence of any drive or urge whatsoever they can be depended upon to do their best. They say they have no sensation of working faster now than under the previous conditions, and that their greatly increased production has been accomplished without any conscious effort on their part. Comment after comment from the girls indicates that they have been relieved of the nervous tension under which they previously worked. They have ceased to regard the man in charge as the 'boss.' They have a feeling that their increased production is in some way related to the distinctly freer, happier, and more pleasant working environment."

It was found that payment was only one of many factors making for contentment, and that in most cases it played a very secondary part. According to the investigators "the relationship between first-line supervision and the individual workman is of more importance in determining the attitude, morale, general happiness, and efficiency of the employee than any other single factor."

My own experience bears out these conclusions in every detail, and I feel convinced that it is one of the most pressing problems which industry has to face. One has only to compare the care and thoroughness with which corporals and petty officers are selected and trained in the Services with the nepotism and lack of training that still characterize many industries in this connexion to-day to realize the steps that will be taken in future years.

Group Reactions

The progressive mechanization and specialization of work have removed much of the inherent satisfaction that can be secured from the creation and completion of one particular product or task; the monotonous character of many office and factory tasks leaves the worker with a great deal of time for rumination and day-dreaming. If the contents of the thoughts are pleasant, the worker will continue with the task quite happily, but if he or she is feeling resentment due to injustice or undue drive from the foreman, there is plenty of time available for the ideas to be gone over and magnified many times. Naturally such ideas are discussed with fellow workers, who frequently reinforce the incident by exaggerated memories of past incidents.

This tendency for feelings of happiness or unhappiness to be shared with those around one is well recognized by us all in ordinary social life, but the importance of this group behaviour in the industrial setting is not always appreciated. Problems of supervision and management grow out of the fact that the individual is always acting under group conditions, although nowhere is his individuality completely submerged.

One of the outstanding characteristics of group activity is the heightened suggestibility of individual members of the group. Actually an individual involved for any length

of time in crowd action soon finds himself in a state closely resembling that of the hypnotized individual. This effect was frequently observed during the war when, if in the course of a retreat a single soldier threw himself on the side of the road and gave way to an attack of "nerves," in an hour or so a hundred men would be found in the same plight. Its force is particularly apt to be felt under the influence of fatigue or conditions of strained attention, such as coexist with excessive overtime and uncontrolled speeding-up.

Security and the Sense of Fear

Another big factor contributing to dissatisfaction and maladjustment is the question of security. We have seen that the individuals especially prone to dissatisfaction are in reality immature individuals who have carried over into their adult life a number of childish characteristics which are normally discarded by other people. Among the most frequent characteristics is an undue amount of fear. It is found that these people are afraid of the dark, afraid of going in buses or tubes, afraid of crowds, and afraid of the future. In other words, they show a state of abnormal anxiety, and no amount of telling them that it is "all rubbish," or that they have got to pull themselves together, will alter this state of affairs. As a rule this undue fear has been built in by over-solicitous parents during the early formative years, and prolonged treatment is frequently necessary for its eradication.

We all know how exhausting it is to be in a state of apprehension about some particular event in our lives. Under such conditions the appetite is capricious, sleep is disturbed, reasoned decisions are impossible, and one feels irritable with everybody and everything. It may be thought that this is an exaggerated picture, and is only true of the odd individual who is "a bit queer." A few years ago Professor Culpin and Dr. May Smith interviewed over 1,000 employed persons in order to estimate the extent of these nervous characteristics, the persons being drawn from Government offices, factories, laundries, and large commercial houses. Whole departments were interviewed so that the results should not be selective. It was found that approximately 30 per cent. of these persons showed definite evidence of an unstable nervous make-up which would predispose them to marked discontent or breakdown under adverse conditions. An example of this trouble is evidenced by the following case which came under observation recently:

A girl, aged 19, and employed in assembling electrical components, was seen as she was frequently ill for a few days at a time, and was also taking days off for no very apparent reason. She was the youngest of three children and had always been treated as the baby of the family. She had been employed for three months, and had held four different jobs since leaving school. She gave a history of generalized fear—for example, of the dark, of the future, and of her foreman. She had never been able to ride a bicycle as she felt too nervous to learn. She could not go to cinemas because she felt that what was being portrayed on the screen was really happening to her.

Six weeks before coming under observation she had been changed from day work to a form of piecework, and said that she got annoyed if some of the other girls did better than she did. Her last absence had been precipitated by the fact that the girl next to her said something derogatory about her to a neighbour. In addition, she stated that the noise got on her nerves, but that she felt much better on some days than on others.

Here, then, is an immature personality, who is dissatisfied with herself and projects her dissatisfaction on to her environment; in the process she blames the noise and her fellow workers and her wage system in turn. Further inquiry elicited the fact that she was very dependent on her father, and ran to him on the slightest provocation.

The causes for this unhappy state of affairs are to be found in the early formative years, and the case is in reality a problem of parent education.

The girl was given considerable reassurance regarding her irrational fears, and was encouraged to seek social interests outside the family group. In addition, the foreman's co-operation was secured; he was asked to give her special encouragement, and thus supply some of the moral support she was in the habit of receiving from her father. Physically, she was found to be perfectly normal, so that ill-health was not a contributory factor in this case. Since that time, and in consequence of three further interviews, she has improved very markedly, and is now enjoying her work and feeling at home in it; she has not lost any more time.

Now if 30 per cent. of the working population show varying degrees of emotional instability, it follows that every firm and organization must have its quota, and it can be seen that attention to such questions as noise and other aggravating causes of nervous irritation is obviously indicated. When we come to the reaction of such individuals to their emotional environment, it can be seen how destructive it is to stimulate still further their sense of fear either by aggressive supervision or by the terms of their employment.

The Dissatisfaction of the Adolescent

It was mentioned earlier that the maladjusted worker was in many cases one who had carried over into adult life a number of childish characteristics that interfered with his functioning happily and efficiently on the adult level. It follows from this that dissatisfaction is especially liable to occur in the years of adolescence, when the individual is still in the formative stages. For convenience this period may be regarded as extending from 14 to 21, although this limit is somewhat arbitrary and can be extended both ways, as adolescence does not suddenly begin or end.

I look to the time when the whole question of initiation and early training in the basic principles and ideals of industry will play a very much bigger part than it does to-day. There is no doubt that the young worker, whether in the office or works, does not receive the individual training and attention in his early days that is really needed. In many cases there is still a general belief that financial incentives play the predominant part in industrial proficiency and contentment, but actually there are many other instincts that can be developed for the benefit of both the industrial and the social structure. The crowd or group instinct should be considered as among the most important aspects, and in this instance early impressions are notoriously important in order to prevent dissatisfaction later. Apart from a well-organized personnel or labour department, which maintains individual contact with all new workers and controls placement, I believe that there is considerable scope for the development of day continuation schools as envisaged in the Hadow Act, where the sense of group solidarity can be promoted and some understanding of the biological aspects of life can be given.

Care of the Individual

So far we have discussed the various factors making for individual dissatisfaction in industrial life. We have seen that they depend primarily on the way that the worker is received and trained, and more particularly on the way he is treated by his immediate superiors in day-to-day contacts. In addition, we have seen that some 30 per cent. of the normal employed population are in reality "nervous" individuals, potentially liable to dissatisfaction and perhaps breakdown in the face of the "slings

and arrows of outrageous fortune." However perfect the organization, however meritorious the ideals of the management, and however "scientific" the wage system in vogue, some at least of these 30 per cent. are potential misfits, and sources of dissatisfaction to themselves and those around.

The control of dissatisfaction at work, whatever its source, demands essentially an individual approach to each case, irrespective of the presenting symptoms. Increased irritability, frequent absences, and prolonged illness of indefinite type are all manifestations that the person is making an inadequate adjustment to the demands of life and environment. This method of approach is comparable to that utilized in child guidance work and in the therapeutic approach to adult neuroses. Each case must be considered as a total entity against a varying mental and physical environment, and it follows that the treatment must be equally individualistic in character. Each case must be examined physically and psychiatrically, so that a suitable programme may be mapped out. In addition, equal attention must be paid to the work environment in which the individual is placed and to the processes of production and the type of supervision with which he is faced. Only in this way is it possible to see the individual as a whole, and to obtain a real understanding of the presenting problem that will lead to real and lasting results.

Conclusion

Surely it is somewhat ironical that although every individual is seeking the greatest possible happiness in life compatible with the discharge of his social and moral obligations, nevertheless those very factors which are most antagonistic to happiness in the industrial setting—physical and mental health—have been almost completely ignored until very recently. What chance of happiness, for instance, has the individual who is constantly troubled with excessive fear, worry, "nervous indigestion," anxiety, uneasiness, or with some one of a host of other ailments of a similar nature? How much can the "right job" mean to the man who is constantly obsessed with thinking about a certain number or other irrelevant fact?

At last, however, the problem of emotional dissatisfaction is forcing itself on the attention of many thinking men who are concerned with the industrial structure. In the coming years, industry must once more broaden its perspective towards the individual upon whose labour it depends. Just as it has come, through increased good will and the various Factory Acts, to improve and augment the physical environment, it must now give equal attention to the securing of the proper orientation of mind, as it affects the individual's work, health, and behaviour.

F. Wise and J. Wolf (*Arch. Derm. and Syph.*, July, 1936, p. 1) deprecate the popular haphazard method of diagnosing all vesicular eruptions of the hands associated with a fungus infection of the feet as epidermophytids, moniliids, or trichophytids. A very large proportion of the adult population of the U.S.A. have or have had at some time a fungus infection of the feet, therefore intradermal or patch tests with trichophytin are of little value in the differential diagnosis of these cases. Careful history-taking is important, and occupational dermatitis, dermatitis venenata, and eczema must be carefully excluded. Finally, a diagnosis of epidermophytid should not be made without strong corroborative evidence, chief of which is the demonstration of fungus either microscopically or by culture from the focus of infection in the skin or nails. They admit, however, that a great many cases of vesicular eruptions of the hands are dermophytids.

ELECTROTHERAPY AND ITS FUTURE*

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It is a most remarkable fact that, among the many and varied agents employed in combating disease, the most powerful, the most easily regulated and controlled, the most fundamental in its action, and the most universally called for, is almost entirely neglected by the medical profession.

Electricity is steadily invading every other sphere of our daily life, but, so far as the human body is concerned, in the activity of which every phase has an electrical basis, its action and application are almost entirely overlooked. It can be confidently asserted that no other form of treatment has a more definite physiological basis or requires for its efficient administration a more intimate and extensive knowledge of the fundamental principles of the vital forces both in health and in disease.

If we wish to apply electrical treatment in a scientific manner and with its maximum therapeutic effect, we must do so in regard to this fundamental action rather than administer it in a purely empirical manner, merely asserting that such or such a treatment is good for such or such a disease.

Methods of Electrotherapy

Let us consider the various forms in which electricity is available for therapeutic purposes. Its primary and fundamental action is that of a blow or impact. Professor Jellinek has demonstrated how, provided that the voltage is sufficiently high, it is possible to drill a hole in paper, wood, stone, or metal without the edges of these holes showing any detectable signs of heat or chemical action. It is the impact of the electrons emitted from the heated cathode of a Coolidge tube which, when they strike the anti-cathode, gives rise to the x rays. In the tungsten arc, it is the electrons thrown off from the heated carbon cathode which, impinging on the positive tungsten electrode, initiate the specific ultra-violet radiation characteristic of the metal upon which they strike.

THE STATIC BREEZE

In electrotherapy, the high voltage of the static spark striking upon an oedematous surface immediately produces a pitted white mark from which the blood and oedematous fluid has been temporarily forced out. When the static breeze is directed upon a raw surface which has been freely dusted with such a relatively non-toxic substance as boric powder, very severe toxic symptoms may develop from the absorption of the particles of the drug forced in at this high voltage.

If the static breeze is directed upon a small pustular papule, the scattered infection will give rise to an areola of similar papules—an unfortunate occurrence which clearly demonstrates the dispersal action of this current. When the static charge is administered, the patient's high-voltage negative charge is attracted to the whole surface of his body by the positive charge induced in his surroundings. In this manner, the electrostatic tension on the cutaneous nerve endings reflexly stimulates the endocrine glands, results in a rise of blood pressure, and is followed by a most invigorating reaction. By means of the Morton wave-current obtainable from this instrument we are able to excite such powerful muscular contractions that by their

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