SOME MEDICOPSYCHOLOGICAL PROBLEMS IN INDUSTRY.

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IN the course of investigations undertaken on behalf of the Industrial Fatigue Research Board one frequently comes up against problems of a medicopsychological nature which urgently need solution. It is difficult to allocate them to any particular branch of medicine or psychology; at the moment they seem to belong to a kind of medical no-man's-land. Perhaps they are best summed up as problems of temperament, although what exactly that connotes it is difficult to express. In occupations where the worker plays as important a part as the machine* there are frequent complaints of, and requests for help for, conditions colloquially described as "nerves" if the emphasis is placed on the person, or "nervy jobs" if a more objective view is taken, or "neurasthenia" if a technical title is desired. It is not uncommon to be told by a worker that he or she has nothing wrong but "nerves" and usually the speaker adds, "And the doctor can't do anything." If enquiry is made as to how the "nerves" show themselves a curious medley of symptoms will be forthcoming. Objectively considered the sufferer will be described as erratic, difficult to get on with, over-fussy about trifles, awkward-tempered, liable to be absent with somewhat vague illnesses. Subjectively he will complain, if opportunity be afforded, of causeless apprehension, inability to concentrate on particular work or at particular times, undue fear of authorities, uncertainty about what he has done (*Janet's sentiment d'incomplétude*), etc. In some people one symptom, touched up by some specific situation, is the chief characteristic, the other reactions being quite normally adapted; in others there are a number of symptoms of varying intensity.

Whatever theories we may hold as to the relation of mind and body (and nobody can work either at physiology or psychology without realising the problem) we have to face the fact that the mind is expressed through the body. But while it is true that a knowledge of the mechanism of the body is extremely desirable yet it is obvious that there are problems which in the present state of our knowledge cannot be attacked by devices primarily concerned with the body.

If one makes a study of symptoms in relation to one another and considers both physical and mental states one finds the following types:—

* There are occupations where the machine is so all-important that the state of mind of the worker is of relatively little moment.

1. Symptoms which appear to expert diagnosis to be mainly concerned with the working of the bodily mechanism. Mental symptoms if present seem to be the attendant circumstances of the disturbed organic state.

2. Symptoms which are directly expressed in mental terms, best illustrated by the obsessions. Usually until a breakdown is imminent the subject says nothing about this aspect, for if he does, the chances are that both doctors and friends think that the remedy is to have a rest, to forget all about it, or to exercise more will-power. The advice is quite useless because impossible.

3. Symptoms which are expressed in bodily and mental form. In the industrial world this is well illustrated by the disability known as telegraphists' cramp. As this has been the subject of a recent research and as it may be characteristic of some other disabilities its investigation will be described in some detail.

It is a disability which primarily affects telegraphists habitually using the Morse or Baudot systems. It manifests itself objectively in an inability to manipulate the telegraphic key, which inability may be complete, i.e., affecting all the movements required for adequate "sending," or partial, i.e., limited to particular letters. The cause has been sought in various objective factors such as the conditions of work, type of keys, as well as in some physiological weakness, but without success¹. The investigations² here reported began by pursuing the usual lines of a scientific enquiry of this kind. A group of telegraphists certified as having cramp and a group of efficient telegraphists were compared from the point of view of success at various tests of neuro muscular ability. Although the results showed that some cramp subjects had considerable muscular disability yet there were a number who showed no disability whatever and who were as efficient at the tests as if they had not had cramp. These tests failed, as had all previous attempts, to find any reliable differentiating factor. The next stage of the research was to study the temperament of the person who had cramp. While it is now possible to test for intelligence with considerable accuracy there is no objective method for the measurement of those qualities roughly known as temperamental. Reliance has, therefore, to be placed on a judgment based on the data obtained at a personal interview.[†] It is to be noted that as this was research work limitations both as to time and questions asked had to be observed. The interviews usually lasted about twenty minutes, and in that time an attempt was made to get some evidence from the subjects with regard to their attitude to various situations in life, to their work, their relations to their superiors and equals, their doubts and fears. If a subject seemed to be well-balanced, adaptable, and efficient within the limits of his abilities he was for statistical purposes designated as 0. This group comprises a very wide range from any point of view. It is merely the type unlikely to have a nervous breakdown. At one extremity is the brilliant, well-poised successful man, through a wide range, to the rather dull person.

[†] Dr. Millais Culpin was asked by the Industrial Fatigue Research Board to undertake this.

If he showed symptoms suggesting pathological anxiety,† obsessions or hysteria he was marked 2, 3, 4 or 5, according to the severity of the symptoms; between these two groups was a type slightly unstable, approximating at the extreme to the psychoneurotic and to the healthy—this was marked 1. This arrangement was not used in the original cramp investigations, the differentiation then being only into those with severe symptoms and those without. Over 70 per cent. of the cramp subjects have severe psychoneurotic symptoms discoverable under research conditions. It would seem then that this is the predisposing condition. The problem then arose as to the incidence of these symptoms in the general population. So far it has been possible to interview groups of typists, telegraphists, factory workers, clerical workers of all grades, architects and various groups of students. In no group is the incidence as heavy as in the cramp group.

Some of the results are presented in the following Table.

TABLE I.
SHOWING THE DISTRIBUTION OF PSYCHONEUROTIC SYMPTOMS IN
DIFFERENT GROUPS. (Figures expressed in percentages.)

		Clerical Workers				Tele- graphic Learners	Art Students	Factory Workers
		A	B	C	D	E	F	G
No symptoms	0	60	46	52	49	54	32	43
Slightly psychoneurotic ..	1	19	22	20	21	27	27	25
Severe psychoneurotic symptoms	2+	21	31	28	30	19	41	32

It will be seen that there is considerable difference between some of the groups; it is of interest to notice the similarity of the groups B, C, D, which although under different management are engaged in very similar work. Group A is superior in having a higher percentage of people free from psychoneurotic symptoms than any other group, and a lower percentage of those with severe symptoms.

We know that special circumstances directed the attention of the medical staff to the importance of studying the temperamental qualities of their employees and there has been a definite attempt to exclude people adjudged to be temperamentally unfit, even though their physical, mental and technical qualities were good. The results seem to have been the exclusion of hysterics

† Anxiety due to current stress in a particular case has to be allowed for. In practice the distinction is not difficult to make.

and of some anxiety subjects. Such psychoneurotics as were on the staff were of the obsessional type, a type experience shows to be, with some limitations, of considerable efficiency. The telegraphic learners (ages 16) were investigated in order to see if these symptoms could be discovered at this early age. It was found that of these, 19 per cent. had psychoneurotic symptoms sufficiently developed to warrant inclusion in one or other of the recognised groups; 27 per cent. had such symptoms in a mild form, probably of the nature of adolescent nervousness which may pass away with experience, while 54 per cent. seemed to be free from such symptoms. We should expect the future cramp subjects to come from the psychoneurotic group. Records are being kept and their future careers will be noted.

Whether all psychoneurotics will develop cramp cannot be said. It is almost certain that owing to the nature of telegraphy they are more likely to break down in it than at some other occupation. A study is now being made of some of these problems.

Apart from specific disabilities like cramp, "nerves" are expressed in the industrial world, in other ways:—

1. *Much sick leave for complaints diagnosed as headaches, nervous dyspepsia, nervous breakdown, nervous exhaustion, neurasthenia, etc.* The remark is quite frequently made that in spite of rest, change of air, medicine, and in some cases an operation, the sufferer is no better. In one establishment over 51 per cent. of long sick leave was definitely psychoneurotic in character, i.e., some form of so-called nervous breakdown, and this does not include such diagnoses as cardiac debility, gastritis, and allied disorders.

The following Table shows the difference between two establishments of comparable character. The first 10 cases of long sick leave during one year on each list were taken.

TABLE II.

F.C.		H.W.	
Days Lost.	Diagnosis.	Days Lost.	Diagnosis.
48	Cold abscess of thigh.	156	Influenza and pleurisy.
48	Duodenal ulcer.	159	Influenza, influenzal debility, nervous debility, nervous exhaustion.
33	Appendicitis.	124	Nervous debility.
126	Motor accident.	181	Cough, high blood pressure, bronchial catarrh, fibrositis.
42	Influenza.	278	Dyspepsia and nervous debility.
30	Influenza.	109	Cardiac and nervous overstrain.
72	Appendicitis.	92	Debility after appendicitis, influenza and lumbago.
38	Motor accident.	140	Rhinitis.
90	Pulmonary tuberculosis.	243	Pyrexia, hydronephrosis.
108	Pulmonary tuberculosis.	105	General debility.

F.C. refers to the same establishment as Group A in Table I.

Owing to their method of selection this firm (F.C.) has a lower percentage of certain types of neurotic and this is reflected in an absence of the nervous breakdown type of illness. As an example the following case is interesting. Every year for five years the subject has been absent for periods of over 30 days' duration for "debility," "gastritis," "neuralgia," "neuritis," "rheumatism." She happened to be interviewed by Dr. Culpin as a matter of routine for research purposes and was diagnosed by him as having serious psychoneurotic symptoms quite apart from her specific illnesses.

2. *Irritability and difficult behaviour.* Some people confine their nerviness to their social relations. Not infrequently they are physically strong and do not have any sick leave for minor ailments. The complaints, however, are quite common of the difficulty of dealing with people who are abnormally resentful of all criticism, of others who alternate periods of normally reasonable behaviour with periods of irrational antagonism to all around, of others who are disproportionately depressed when things go wrong. Where data can be obtained such people have usually been proved to have anxiety symptoms, although the number investigated so far is too few for statistical purposes. Should such people be in positions of authority (and they often are found there), the unhappiness caused to subordinates is incalculable. These people are more likely to break down in middle age, and, on the basis of no previous sickness absenteeism, the breakdown will be looked upon as a bolt from the blue and attributed to overwork. The real history is not the physical health but the mental stress and difficult adjustments forming the background; nor is it difficult to learn about these symptoms if an opportunity be afforded.

3. Psychoneurotic subjects are also on the average more sensitive to objective conditions to which other people are neutral, e.g., noise, the absence of noise, type of machine; they tend to find less satisfaction in their work, and (excepting the obsessional) to be less efficient than their abilities warrant. Obsessionals are however on the average intellectual and efficient; their mental distress is rarely obvious to the observer: when they do break down their attack is usually severe.

It would certainly be an advantage if the medical profession could diagnose and help at an early stage the sufferers from psychoneurotic troubles. In many cases some insight into the nature of the trouble will bring about improvement; others need prolonged treatment. To dismiss the problems with the magic word "hysteria" is neither honest nor practical and to leave the mental symptoms on one side while emphasising any physical weakness that happens to be present is unfair to the patient and wasteful to the community.

REFERENCES.

- ¹ *Report of the Departmental Committee on Telegraphists' Cramp*, C.D. 5968.
- ² *A Study of Telegraphists' Cramp*, Industrial Fatigue Research Board Reports, No. 43.