VOCATIONAL REHABILITATION OF SOLDIERS SUFFERING FROM NERVOUS DISEASES*

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IT was not unreasonable to have expected that many men in the armies would be unable to stand the mental strain imposed on them. Hardly anyone, however, was prepared to find such great numbers of men so disabled by neurasthenia alone that they must needs be discharged from the army. In England nearly 20 per cent of the 175,000 pensioners are suffering from functional nervous disease and the greater part of these have not been actually wounded. In Canada, over 10 per cent of all the 25,000 men who had returned up to October 1, 1917, were classified as mental cases. This category included insanity, shell shock, neurasthenia, etc. If those who were returned as overage, underage, and for duty are excluded the mental cases represent 15 per cent of the invalids, and if those suffering from actual wounds are not counted, the mental cases constitute 25 per cent of all those returned from the Canadian army in England and France.

From a purely military point of view this factor of war neurosis is highly important where so many men have to be discarded from mental causes. From an economic standpoint, the treatment of so large a percentage of invalids in order to reinstate them in productive work is a serious matter. This exceptional phase of the war has been met with the same thorough consideration, consummate skill, and hopeful progress as the other phases of medical organization.

In the early period of this struggle the men showing evidences of neurasthenia and allied disorders were removed far from the front lines and even sent to England, where no special institutions were in existence for their treatment. They were cared for at first in the general military hospitals, but the alarming increase in the number of these cases led to their segregation and special methods of treatment by the spring of 1915. When the German

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submarines began to sink hospital ships as well as all other kinds of tonnage, a great deal of the medical service was, perforce, carried out in France. From the experience gained, the British and French were led to take care of the neurotic cases nearer the lines. Neurological centres are now established in the immediate rear of the trenches out of range of all except the heaviest guns. A special Shell Shock Hospital is run in conjunction with a Clearing Hospital in each army area. Each individual soldier is looked upon as a separate case. He is carefully interviewed, diagnosed and classified. The main thing is to find out the personal matter that troubles each man. The doctors, nurses, and staff are all carefully selected for their special abilities and personalities. The atmosphere of the institution is a deliberately planned mixture of firmness and kindness. It has a military tang, but is not so impersonal and severe as the army. All of the staff are expected to radiate optimism and cheerfulness. The patients are kept as far as possible from introspection, the worm that feeds upon sick nerves and tends to make them sicker. Quick recoveries are the rule and a high percentage of the men return to the trenches inside of a month or even within a fortnight. An expert French medical officer in charge of one of these centres reports that 91 per cent of the cases received in a four-month period were sufficiently recovered to send back into the fighting line. This is a highly important achievement from a military point of view in keeping up the strength of the battalions. Regimental officers have been given printed instructions to the effect that they should themselves aid in helping men whose nerves are temporarily jarred by encouraging remarks at the right moment. For fear that there might be some malingering in this direction the medical officers now classify men as suffering from neurosis "A" and "B" instead of neurasthenia and "shell shock" the symptoms of which had become all too familiar with the common soldiers.

If the patients do not show signs of quick recovery they are sent to the base or to England. If they are Canadians and will not be fit again within six months they are sent home for further treatment before discharge. When they arrive in Canada, at Halifax or Quebec, they pass before a standing medical board which has the accumulated experience from handling thousands of cases.

If the men are suffering from a form of mental disease that treatment will not benefit, they are sent to the hospital for the

insane in the province to which they belong. The government pays for their maintenance and if the man is married, his wife gets the same pension for herself and her children as if her husband were dead.

If the case is severe and needs more careful diagnosis and treatment, the man is sent to the Central Hospital for Nervous Diseases at Cobourg, Ontario. This is delightfully situated in rural surroundings and is under the direction of trained specialists. From here, patients may be discharged to hospitals for the insane, to regular convalescent homes, or to civil life.

If the case of neurasthenia is mild, the man is sent to the regular convalescent home nearest to his own home. There is not much that he can get in the way of diet or medicine to improve his condition so that he is often made an out-patient and allowed to live with his friends or family.

The men at the Cobourg Hospital at one time do not represent the average type of cases which are treated there.

Captain C. B. Farrar gives an analysis of the patients as of February 1, 1917.*

	Cases	*Per cent*
Fairly definite types of dementia praecox	17	34
Psychopathic inferiority, morons, etc.	6	12
Defectives belonging to above two groups	4	8
Dementia paralytica	6	12
Shell shock or trench neurosis	6	12
Other neurotic reactions	3	6
Alcohol as dominant factor	2	4
Manic reaction	2	4
Depressive reaction	1	2
Epilepsy	1	2
Trephine epileptoid	1	2
Paranoid	1	2
	50	100

Captain H. A. McKay, the Medical Officer in charge of Cobourg, states that in December, 1917, the cases were classified as follows:

* War and Neurosis, *American Journal of Insanity*, 73: 696, April 1917.

	Cases	*Per cent*
Insane	15	20
Shell shock	11	14
Crucial epileptic	1	1
Mentally defective	5	7
Moron	1	1
Dementia praecox	8	11
Nervous instability	9	12
Hypo-mania	3	4
Delusional insanity	3	4
Melancholia	5	7
Epilepsy	3	4
Stupor	2	3
Dementia	3	4
Confusional insanity	6	8
	75	100

Hydrotherapy and electrotherapy are used with most gratifying results, but some form of vocational training is depended upon to build up the will and initiative of the patient. If he is allowed to spend most of his time idle, or if he is given too many consultations and much involved treatment, he will have continuous opportunity for his mind to dwell on his disability and is in danger of becoming a confirmed neurasthenic. He must be given some light occupational work so that his interest will be aroused and his mind kept from instrospection. His initiative and confidence in himself must be awakened. He is first told that his nervous disability does not at all unfit him for success in some civilian occupation, but that it is severe enough to debar him from any further military service. This sets his mind at rest about being returned to the army and directs his attention toward the future. He is then given some light occupation such as basketry, clay modelling, etc. At first he works only an hour or two but this is gradually increased until he is working all day. Then he is graduated into classes where more diligence and effort is required, such as the carpentry, gardening, or pottery class. The men are praised judiciously for satisfactory performance, but the officials are always firm and do not "mollycoddle" the patients or sentimentally sympathize with them. After the men show a live interest in the vocational work the doctors do not pay much attention to the medical massage treatment so that the mind of

the patient is almost entirely concerned with other things than his own condition. The vocational training in the institution at Cobourg should be classed as occupational therapy because there is not the serious industrial motive underlying it that exists in vocational re-education. When the patient is fit to return to civil life he goes back to his old job or enters a course in another institution or else is apprenticed in industry to gain the knowledge and skill necessary for his success in some regular occupation.

By far the greatest number of shell-shock and neurasthenic cases go to regular convalescent homes. Their disabilities vary from the man who is highly nervous and cannot give sustained attention to any one thing to the man whose head continuously waggles or has continuous tremors, or stutters so badly that he has to write his expressions. It must be clearly recognized that practically all of the returned soldiers are mentally abnormal as compared with their condition before enlistment. For months or, perhaps, years they have had to repress their individualities and sink them in the army machine. Their severe drill and discipline has bereft them of part of their initiative because they have been taught to obey without question or argument. They have had little thought for their food and raiment; these were chiefly the concern of others. They have had practically no worry about the maintenance and well-being of their families. Except for certain periods of supreme effort and uncomfortable conditions of living, they have found military life easier than the hard grind of the life which they left behind them. Death has lurked at their elbow night and day in so many terrifying forms that they have come to think little and lightly of the morrow.

After the glorious comradeship of the trenches, the grim excitement of the charge, the explosion of bombs and shells, the high tension atmosphere of the front, civilian life appears casual and safe, but cruel and cold. To break down the habits that have been formed by the iron will and mailed hand of the army is more difficult than to instil them. It is harder to demobilize than to mobilize. To give the returned soldier the power for continuous attention to the humdrum tasks of peace conditions; to make him react truly to inspirations generated from within himself; to regenerate his initiative; to drag him away from the condition of depending on external stimuli for thought, amusement, and action—these are the difficult tasks set for those who are responsible for preparing him to shed his uniform.

The end to be accomplished is even more difficult with the returned neurasthenic than with the average case in the convalescent homes. As a layman who knows nothing about medicine, it seems to me as though it would be better to segregate the distinctly nervous cases in institutions away from their own homes. The man suffering from shell shock without any wound or disease receives little sympathy from most of his comrades. If he is especially jumpy or nervous, some practical joker is very likely to throw a piece of crockery or an electric light bulb to smash with consequent distressing results. Then again, when made an outpatient and permitted to live at home or among friends, much maudlin and misdirected sympathy is showered upon him so that his neuropathic condition is fixed or aggravated.

Liquor is like poison to shell-shock cases. One Scotchman told me mournfully that the war had wrecked his constitution and that now two drinks made him crazy, whereas he "used to stow away a bottle of whiskey and walk away with it." In another case a man had almost recovered after six months' good rest with light occupation. One evening some of his comrades took him along with them to a prize fight. He was given a small amount of liquor and this, together with the excitement, caused such a relapse that he had to be brought back to the home and put under the influence of opiates in order to control him. Then began another long period of convalescence. In order that such conditions could be more securely controlled and so that exactly the proper environment could be secured under trained specialists, it would seem to the writer that a special convalescent home for neurasthenics in the suburbs of a city would give speedier and greater returns.

The regular application of a program of vocational training is carried out with the shell-shock man as it is with the other patients of the convalescent homes. When a man who needs further treatment returns to Canada from England or France he is usually placed in an institution near his own home. If he is an orthopedic case, however, he goes to Toronto; if a severe mental case, as mentioned before, he enters a Provincial Hospital or the Central Hospital for Nervous Diseases in Cobourg, Ontario. He is given a short leave of a few days to spend with his family and friends, and then begins the program which aims at his mental, physical, and wage-earning restoration to civil life.

In Canada, in the early days of the war we thought, as perhaps you think now, that the men who return would be more or less

seriously mutilated and crippled. At that time we thought that we should provide hospitals to care for very sick men. Wealthy people in the Dominion turned over magnificent residences where the men could loll in luxury and ease. Women with more zeal than judgment lionized the first detachments of returned heroes and vied with each other in the entertainment and attention to the first cripples. The soldiers who, themselves, thought they had done their simple duty were told so often that the government could never repay them for their services that they came to believe it. All these artificial conditions were ill adapted for the rehabilitation of nerve-racked men.

After some experience it was found that the men were deteriorating in morale and were getting less fitted to face the cold hard facts of ordinary life. They played cards, pool, billiards, and other enervating games; they read trashy magazines, or simply slept or sat away the time.

These men were not hopeless cripples. More of them had been rendered unfit for fighting by disease than by wounds. Out of the first 25,000 men who returned to Canada, only three per cent had suffered amputations of any kind. Fifteen hundred of them were tuberculous and the commonest disabilities otherwise were heart disease and rheumatism. In the army of 400,000 which Canada sent overseas, up to date, only thirty-four individuals have lost their sight. The man in the front line trenches has to be in the absolute pink of condition so that a comparatively slight disability throws him into the discard. Potentially these men were nearly as good as ever for industry and business. The government could not afford to leave anything undone that would restore them to perfect health so far as possible and fit them as nearly as possible into the position in which they could develop their highest productive power.

The institutions most necessary for treatment of these men were convalescent homes, not hospitals. The soldier would have to be treated in Europe so that he would recover sufficiently to withstand the hard ocean trip. The small convalescent homes which were first established were found to be ill adapted to their evident needs and too small to be administered economically. Then the Military Hospitals Commission began to plan and build new sanatoria and convalescent homes in large units exactly suited to the purposes for which they were to be used. The homes are usually situated near large cities so that expert medical

services may be secured and each has a capacity of 300 to 1,000 patients.

In order to make proper use of the time of the soldier during the day, vocational training was introduced into every home and now the vocational building is an integral part of every new building plan. At first the classes were voluntary, but the revolutionary changes in discipline, morale, speed of recovery, etc., were soon so apparent that attendance in the vocational work was made compulsory for every man not excused by the medical officer as unfit.

Instruction is given in English, French, arithmetic, stenography, bookkeeping, typewriting, telegraphy, woodworking, shoe repairing, mechanical and architectural drawing, care and operation of automobiles, machine-tool operating, electrical wiring, gardening, poultry farming, etc. The daily program calls for an attendance of from four to four and one-half hours per day. The opportunities offered vary with the size and situation of the convalescent home.

Each man is interviewed soon after he enters the convalescent home and makes his choice of classes. If he has any good reason to change he is allowed to take up other work or to combine classes. Some of the ambitious men looked upon it as a chance of a lifetime and made astounding progress. Some patients learned enough so that when they were discharged from the army they took up new positions of advanced responsibility at greatly increased remuneration. A few were able to get instruction that they had always desired and started civilian life in an entirely new field. Most of the men accepted the vocational work as part of the régime and a few had to be driven. I could tell you some remarkable achievements of the men trained incidentally while they were getting well and some who got well mainly through the vocational training; but today we are chiefly concerned with the neurasthenics.

The nervous cases were treated individually by the Vocational Officer just as they were by the doctors. The persistent motive was to find some basis of interest in the man. The aim was to find something light and easy for him to do that would take his attention from himself. One class of work that seemed fairly attractive was making novelties and hand-wrought jewelry.

We secured some used cartridge cases from one of the battle fronts and used these for handles in making up such war souvenirs as envelope openers, paper cutters, shoe horns, nail files,

bottle openers, bodkins, etc. Men made rings and brooches for themselves and their friends. The articles made could be kept by the patient if he paid for the raw materials or we sold them as war souvenirs to the public at reasonable prices, deducting the cost of materials and a percentage for disposing of them and keeping the balance as a nest egg for the man against the day when he should be discharged. The work was light and interesting; none of the things made required much physical effort or time; the man had an economic incentive in making a few extra dollars, and his strong instinct to create something was satisfied. Their heads stopped waggling; the bright strained look in their eyes disappeared; they ate well and slept well, and they got a grip on themselves.

Do not think, however, that there is any one class or group of classes that is a specific for nervous cases any more than that there is one medicine for all diseases. The main thing is to find some basis of interest in the person and there are almost as many different tastes as there are individuals. Very rarely the man would be interested in a class which required mental effort. I remember two cases where they started easily in mathematics and drafting and at the end of seven months had jumped from arithmetic to the end of trigonometry. One of these men became so proficient in machine drawing that he entered and satisfactorily filled a position as a mechanical draftsman at a salary exceeding greatly the one he had left to don the uniform. Most of the men like creative work with the hands. Light woodworking and machine-tool operation have been selected by a number of shell-shock cases. Most doctors would say offhand that a machine shop is too noisy a place for such patients. A good shop for instruction purposes is a quiet place and the men do excellent work in the main. I remember one outstanding case of bad nerves who threw a hammer at the head of the instructor one day during his first month when spoken to too quickly from behind. This man had been following an occupation before the war which is not listed among honest vocations. At the end of seven months he was a competent all-round machinist and said that he thanked God that he could go out and earn a good living at an honest trade. On Sundays or other days when he was not working in the shop he was nervous, irritable and excited during the first few months. Not always are we successful. One case of a docile man whose head waggled continuously, but not seriously, showed much enthusiasm

for machine-tool work. He progressed satisfactorily under close direction for three or four months and then was taken away for a little more than a month for hospital treatment. When he returned to the convalescent home he immediately entered the class again, but had forgotten practically everything he had previously learned.

Another interesting case that is developing at the present time is that of a Boston boy. He came back from the front severely injured in the shoulder and with almost a total loss of memory. He was treated at Cobourg until his condition became stationary and was then sent to live with his sister. He was well nourished and comely, but completely apathetic and would not even wipe away a tear if it rolled down from his eye. He could not be trusted to go out alone even for one block because he could not find his way back, but would always wind up at a house where he used to live before the war. His sister used to bring him to the convalescent home every other day to have his arm massaged, but no interest could be aroused in him by offering him any of the instruction being carried out there. Finally after careful consultation, a woodworking bench with tools was set up in his own kitchen and an experienced teacher sent there every day. The attempt was made to get his memory to function again properly by having him learn and repeat the names of the tools and the woods that he was using. He appeared to be aroused from his sluggishness in a month, but then took a strong dislike to the teacher and balked. After another consultation it was decided to try instruction in telegraphy because he had once taken a partial course in this subject. Instruments were purchased, set up in his home, and a special teacher provided. This has been carried on for nearly four months and seems to have struck the right spot. He has learned the Morse alphabet again, knows how to spell a limited number of simple words and is capable of sending and receiving messages which do not run outside of his limited vocabulary. The hopeful fact is that he really exhibits some enthusiasm in the work. It may be necessary to switch to some other course later to rouse his consciousness fully and develop his power so that he can learn something by which he may earn a living. Perhaps we will fail, but a great deal of effort is justified in trying to save a boy of twenty-one for a life of usefulness instead of leaving him as an absolute dependent.

A number of doctors have prescribed farming and truly rural conditions for shell-shocked men, but I am sure that some of the

soldiers who have been reared in the city (and one third to three fifths of them have been) would find the strange loneliness an aggravation rather than a balm. I know of one case especially where an intemperate man who had been a farmer appeared to be an arrested case in the convalescent home. It was arranged that he should be placed on a farm where he would not be exploited or pampered. Farm help is so scarce that the owner gave him thirty dollars a month in addition to his military pay. At the end of two and one-half months he returned to the home minus tremors and flushed face. He had gained considerably in weight and boasted of the fine time he had had.

I believe, however, that there is no single panacea in vocational training, or in any limited group of subjects, which will solve the problem of straightening up the shell-shock case. It is necessary to ascertain the thing in which the man is most interested and then to furnish work or instruction in that direction, no matter whether it is landscape painting or furrowing the landscape with a plough. With mild cases, the patient should be directed toward regular recognized wage-earning occupations. He should not be given special handicraft work in basketry, toymaking, etc., except in the early stages as a therapeutic measure. These are best adapted to seriously crippled men and will lead him to think he is not capable of holding down a real job.

The vocational training in the convalescent homes is only incidental and supplementary to the medical treatment. When a man becomes an arrested case he is discharged whether he has finished a course or not. If he is then unable to follow his old trade successfully he is a subject for vocational re-education. He is brought before a Disabled Soldiers Training Board, composed of a special medical officer, a vocational officer, and a layman who may be an employer, a labor organizer, a business man, a professional man, etc., representing the public. The man's desires and former occupation, together with his disability are carefully considered, and he is advised in regard to the vocations he may enter with probability of success. He, however, makes the choice himself so that he has the greatest stake in his future training. The effort is made to keep him as close as possible to his former work so that his industrial experience and skill may not be altogether scrapped. It is very evident that, if possible, he should be moved up to a position of greater skill and responsibility where he must use his intelligence more and his physical strength less.

This is often possible, but is not usually the case. The attempt is then made to place him in some occupation in the same industry, but parallel with his former work where his disability is not a serious handicap. If the central authorities at Ottawa concur in the recommendation of the Disabled Soldiers Training Board, the man passes out of the Army and becomes a civilian under the control of the Vocational Branch of the Military Hospitals Commission. He receives special pay and allowances running from a minimum of $46.00 a month, if he is a single man with no dependents, to a maximum of $93.00 a month in the case of a married man with five or more children under sixteen years of age. This allows him and his dependents to live respectably while he is getting his training. He may be sent to a technical school, a college of pharmacy, an agricultural college, a business college, a navigation school, or other special institution, or he may be regularly apprenticed in an industry. The courses usually last six to twelve months and are entirely free of cost to the man. He is given an extra month's pay at the end of his course, a position is found for him, and no deduction is made from his pension because of any proficiency or wage-earning power he has acquired at the expense of the government.

Thus Canada is trying to place the disabled men on their feet again in civilian life. The attempt is being made to eliminate the most pitiful by-product of war, the "old soldier." Having before her the experience of the United States after the Civil War, Canada is determined to have no crop of "carpet-baggers," pension mongers, and government alms takers with the consequent commonplace filching of national funds and degeneration of civic honesty. The gospel of the busy life for everybody is being preached and practiced among the returned invalid soldiers. Salvation through honest work applies to the hero home from France as much as to the mental defective or social delinquent. The satisfactory results already achieved in Canada stamp the vocational training and re-education as the most hopeful activities in rehabilitating the men who have placed their body and brains as a barrier against the horrible flood of German ideas that threatened to overflow the world, and who have given freely of themselves in this glorious service. The goal is to make the soldier's disability his opportunity and to prove that his sacrifice will furnish him a staff with which to support himself instead of a millstone to drag him down.