

CHAPTER VIII

WAR EXHAUSTION

IN Field Service Regulations we read as follows :—

“ War can be brought to a successful conclusion only by the defeat of the enemy’s armed forces and the destruction of his power of resistance. The object to be aimed at in designing an Imperial Army is to produce an organization which can achieve this result in the minimum of time, with the minimum expenditure of men, money and material. One of the basic principles of war organization is to economize military force by utilizing to the greatest extent possible the ordinary machinery of civil life to assist the forces in the field.”

The art of war is to expend our enemy’s resources while conserving our own. Strategically, tactically and administratively, we must apply the principle of economy of force so as to prevent war exhaustion in our own nation while compelling it in that of the enemy.

War of the continental type is no longer the affair of the fighting services alone ; every department of state, every man and woman, is affected. Every citizen must be prepared to play his or her part in the defence of the nation’s vital interests : as soldiers we endeavour to do this by the destruction of the enemy’s powers of resistance ; as responsible officers we should endeavour to educate our civilian brothers in their duties in this connection, so that our national machinery may be so organized as best to conserve our military resources.

It would hardly be possible, short of a book of many pages, to give a comprehensive list of the items which can legitimately be classed as war matériel. Such a list would vary from the obvious items like guns and ammunition to the less obvious, though possibly vital, commodities such as jute and shellac, which, as pointed

out in Chapter V, can only be obtained in bulk from India.

Of all the requirements of war, man power is the first and most important. Even when we arrive at the days of the death ray we shall require men to make the appliances, or produce the plant and power for its manufacture and projection. The exhaustion of man power is therefore our first consideration, but the exhaustion of matériel is a very good second, as men alone without the means of feeding and fighting would not go far towards winning the war.

We need to organize our man power in peace and to conserve it in war; similarly we must organize and protect our material resources so as to prevent their premature exhaustion in war. Men and matériel are both essential, but without a determination to win in the civil population as a whole, the big wars of the future will not be brought to a successful conclusion. The tendency of modern war is to bring the importance of this last factor into greater prominence than ever before.

In considering the problems of war exhaustion in their application to continental wars of the first magnitude, there are therefore these three main factors to be dealt with :—

- (a) Exhaustion of man power.
- (b) Exhaustion of war matériel.
- (c) Exhaustion of the determination of the civil authorities.

Each of these headings will now be discussed in turn in the light of the more recent requirements of modern warfare.

Unlike the great continental nations, with their compulsory service systems, we have no general registration of our man power. We do not really know the numbers and distribution of our available resources of men physically fit to fight. Still less can we readily lay our hands in time of need on the very large numbers of

skilled tradesmen of innumerable grades and types required for the maintenance of our armies. Short of a change in our national psychology and of our constitutional laws, it is hard to see how this difficulty can be overcome. At the beginning of the Great War, and, indeed, at all stages during it, our first need was men, and we have every right to congratulate ourselves on the magnificent response of the nation to the first calls for volunteers to fight. On August 6th, 1914, 100,000 men were asked for; by August 25th this number had been practically secured. Although the total had to be multiplied eventually by ninety, the response of the nation was really magnificent. The very magnificence of this response was, however, partly the cause of our subsequent difficulties as regards man power, especially in connection with munitions supplies.

The skilled employees of the armament firms and likewise of the building and allied trades enlisted in large numbers. The result of this was to reduce the munitions output by about half what had been anticipated, and to make it impossible to start on the necessary extensions of the firms' premises.

If we consider the situation at the beginning of the war, we find the recruiting officers, under the orders of the Adjutant-General, making every effort throughout the country to enlist men to serve with the colours, while similar organizations were at work recruiting for the Navy and the Royal Flying Corps, as it then was. The Master-General of Ordnance was applying to the Board of Trade for skilled workmen required for munitions work, while the Board of Trade was primarily concerned in the maintenance of the country's commercial enterprise so that our export trade should be in a position to maintain our credit overseas. Men were required for the fighting forces and for munitions work; to maintain them, industry, in turn, had to be kept going. No authority existed, until the Military Service Act was passed, under which our man power could be controlled or directed into the channel most

essential for the country's need. The various agencies at work were in many ways competing with one another, and thereby adding to the nation's difficulties, and no man could be compelled to serve with the colours or to work at munitions provision. The only way to deal with the situation was to have one authority dealing with the provision of personnel to meet all the nation's needs, whether for Navy, Army, Air Force or Industry.

The lesson is that for a war on a grand continental scale we must have a National Service Act, and still more in peace do we require a National Registration Act, without which we have no means of gauging the nation's potentialities in skilled workers of any grade or of knowing where we can lay hands on them in time of need.

Whether or not the nation is prepared to accept legislation to this end, is not for the soldier to say ; but one thing is clear—that for a great war we must have government control of labour and its movements, and, just as before the war Lord Roberts preached National Service, so should every soldier to-day preach National Registration.

So much for the question of provision of man power ; it is a problem primarily for the statesman. As soldiers we are more directly concerned in preventing the wastage in war of the man power placed at our disposal by the efforts of the Adjutant-General's department.

In battle we aim at reducing our casualties from the enemy's shells and bullets by adopting the most suitable tactics, and by improving the co-operation of all arms so that we can attain our object with the minimum of losses. In peace, too, we study the principles of sanitation and hygiene so that we can apply them in the field to the prevention of casualties from disease, which in the past have proved such a serious drain on our armies in war. In future, as the result of our experiences in the Great War, we must study the causes and means of prevention of psycho-neurosis—more commonly, if erroneously, called shell shock—as

this disease was responsible for very serious wastage of man power in the last war.

Our actual losses from psycho-neurosis during the war were certainly very heavy. At the time of the Armistice no less than 65,000 soldiers were in receipt of pensions from this cause alone. Of the total number of cases of psycho-neurosis which occurred, it was calculated that 90 per cent. were not due to actual shock of shell explosion or physical wounds, but were due to a mental state brought about in the individual by the conditions of existence and prolonged strain to which they had been subjected under the circumstances of modern war as we knew it between 1914 and 1918.

In addition to the numbers who were actually evacuated from this cause, there must have been many whose fighting efficiency was considerably impaired, although they may not have reported sick. Here, then, is a very definite form of war exhaustion, and it is one which all officers can do a very great deal to minimize or prevent.

Since the war this disease has been the subject of close inquiry, and the "Report of the War Office Committee on Shell Shock" contains a lot of most interesting evidence from commanding officers, staff officers and medical officers which will well repay the time taken in reading it. The burden of the conclusions come to by this committee may be very briefly summarized, for our present purpose, as follows :—

- (a) Psycho-neurosis is a definite disease, which in certain circumstances is contagious, resulting possibly in panic or in desertion to the enemy in serious proportions.
- (b) High morale and good leadership undoubtedly tend to lessen the condition if not to prevent it altogether. When discipline is bad you get desertion, where there is no *esprit de corps* you get cowardice ; where you have a high standard of *esprit de corps* and discipline you

do not find these things and you get very little shell shock.

- (c) To prevent psycho-neurosis, therefore, we must first of all promote good morale, and back this up by good interior economy and good administration in units. When the conditions of active service admit good food, rest, exercise, baths, clean clothes, entertainments and leave, are potent factors in preventing psycho-neurosis. Good sanitation and the physical comfort of the men must have our constant attention, as they very considerably affect the incidence of shell shock.
- (d) Though a good regimental medical officer is of the highest possible value in this connection, it is the unit regimental officer who really tells and who can do most to prevent war exhaustion from this cause. It must, however, be realized that the requirements of modern war are nations in arms, and as our expansion for war increases the recruiting net is cast wider and wider. We must then take in a type of man whom we would reject for military service in normal times. It is then that this question of psycho-neurosis assumes serious proportions. We should be able to eliminate it entirely in a highly trained voluntarily recruited peace time army.

Let us turn now to the second heading—the exhaustion of war matériel. No country in the world is entirely self-supporting as regards all its raw material for war. The United States are probably better off than most, but even in their case there is quite a formidable list of items to be obtained from other countries. What we have to consider is how we are going to prevent the exhaustion in war of our essential material needs, and how we can best turn the question of the war exhaustion of an enemy's material resources to our own advantage.

The answer to the second question is found in the application of the blockade, of which no better example can be found than the blockade of the Central Powers during the Great War. There are, of course, many serious difficulties in applying a blockade effectively, difficulties arising out of the rights and privileges of neutrals, which will often present most delicate and complicated problems in international diplomacy. But the war taught us how vital the supply of such things as cotton, nitre, fats, rubber and such like commercial items are to a nation engaged in war, and the weapon of the blockade is one that we as a nation cannot afford to dispense with in a continental war.

The solution of the problem of how to prevent exhaustion of our own raw materials is much more difficult. The two outstanding factors in this connection are finance and time—finance which precludes the holding of vast reserves in peace against possible war eventualities; time since, when mobilization is ordered, large stocks of every kind of need are called for faster than they can possibly be produced or imported from outside. As an example in connection with the time factor, it is interesting to note that one item which seriously delayed the equipment of our new armies in 1914 was a complete failure of the trade to supply sufficient buttons!

The subject of peace-time reserves and the problems of munition supply in war have been dealt with in an earlier chapter, both from the point of view of time and of finance; and it has been pointed out that finance prevents adequate peace-time provision being made against exhaustion of our material resources in war, while time is the chief obstacle to overcome in creating the necessary reserves when war had begun.

Though we are very far from being self-supporting in this country, we are very nearly self-supporting within the Empire, and this aspect of the war exhaustion problem needs consideration and further development. This is not purely a matter for the civilian and the

politician ; the fighting services must give voice to their needs. We must ask for what we want, and keep on asking, for in proportion as this provision is not made will future generations groan under still heavier taxation after the next war.

It will be as well to consider at this stage how the problem of war exhaustion is affected by the mechanization which is gradually being applied to the army to-day.

All the leading nations are now busy mechanizing their armies, and most of them have or are thinking of starting tanks. Could we not as an industrial and commercial nation aim at becoming the supplier of tanks to the smaller nations, and thus establish a peace-time industry which could be developed in time of war to meet the requirements of our army ? The existence of such an industry would prove of the highest war-time value to any country possessing it.

To take another item : the 30-cwt. lorry carries approximately the same load as the old G.S. wagon ; both require one man to drive and look after them. The 30-cwt. lorry has increased speed and radius of action ; but the average life of the lorry is two years, personnel for repairs and maintenance are required in the theatre of war on the basis of one man to every three vehicles, and what of personnel for production of new lorries and spare parts ? With this mechanization you get increased efficiency, but you pay the price in men.

The mechanized armies of the future must be prepared to make extensive replacements of lost and damaged equipment at an early stage in the operations, or they will be seriously handicapped in retaining their essential mobility.

We must decide on our military requirements, and we must aim at developing our industrial resources on the lines of these war-time needs ; this development must keep pace with our application of mechanization to the army, or there will be danger of war exhaustion overtaking us from our very mechanization.

The possibility of chemical warfare presents further problems in connection with war exhaustion.

Most nations, but not all, have agreed not to use gas in war, but we cannot tell yet with whom we may have to fight next. The use of gas may be forced upon us if our enemy first uses it against us. We must remember, too, that gas, or the fear of a gas, is a potent factor in producing shell shock. We can take defensive measures by way of the provision of gas masks for our fighting personnel; and we can organize defensive measures and decontamination parties for our towns and villages which are open to attack with gas from aeroplanes; but offensive organization is more difficult. We are now, as a nation, much better off than we were before the war in this respect. But for war purposes, if gas was to be used, we would need to expand our chemical industry very considerably; we should be compelled, too, to mobilize our chemical engineers and organize the work of our by-product coke ovens. In this respect, as in the others already mentioned, the soldier in peace must study what his possible requirements may be in war; he must be ready to tell industry exactly what these requirements are, and our Government organization must then see that industry can meet the nation's military needs.

It is clear from the few examples quoted that the developments of modern war have made the problem of war exhaustion of much greater importance than it ever was in the past. The whole resources of the nation are now required and the rapidity and effectiveness with which industry can be organized to meet the emergency cannot but have an enormous influence upon the issue of the struggle.

The soldiers' peace-time duty in connection with industry has been touched upon, also his duty in peace and war in connection with discipline, interior economy, and the inculcation of morale as a means of preventing psycho-neurosis. There is another war-time duty of considerable importance in connection with the preven-

tion of exhaustion of war matériel, and that is salvage. A good salvage organization can do much to prevent unnecessary and avoidable waste. If the statistics of the war are studied it will be found that literally millions of pounds sterling were saved by salvage operations. The reconditioning of abandoned clothing and equipment, the production of by-products from messing and from fat eliminating plants, and the organized clearing of battlefields resulted in truly enormous savings. The loss of equipment by careless soldiers; the dumping of unnecessary quantities of ammunition in places from which it could not readily be collected again, or where it would deteriorate; the breakdown of lorries from overloading or bad handling; the loss of horseflesh from bad horse management, are all questions which, if neglected, have a big cumulative effect towards the production of war exhaustion, and they are all matters which can be lessened by care, forethought, and energy on the part of staff and regimental officers. Salvage is a question of organization for its collection, prevention of waste is a matter of discipline.

Painted on walls and houses in the battle areas of France and Belgium may still be seen the words: "What have you salvaged to-day?" This was a necessary reminder in the days between 1914 and 1918; it will be equally necessary in the next war as one means towards the prevention of war exhaustion.

Coming now to the question of exhaustion of the civil authorities. General Ironside reminds us in his book on Tannenberg that "Military thought cannot afford to ignore the ordinary feelings of human nature," and he also states that "the great fault of the German General Staff throughout the war was that it placed itself apart from the German people and ignored their feelings." We must be careful not to make the same mistake. The psychology of the British race is such that in time of peace or fancied security it is peculiarly averse to taking any military precautions and are very unwilling to pay the

premium necessary as an insurance against the possibilities of war. When once convinced that the real emergency has arisen, it comes forward magnificently to fight in defence of its country. Modern war is now an affair of nations, and on the European scale future wars will not be brought to an end until all the resources of one side or the other have been exhausted. It is above all necessary, for the successful conclusion of a big war, that the determination to win of the civil population should be maintained.

War weariness of the nation may be brought about by blockade, by unrestricted submarine warfare, by air attack on civil centres of industry and these forms of warfare are likely to take a more prominent part in future wars than in the past. As soldiers and citizens we have to play our part in preventing the exhaustion of the nation's determination.

Much can be done by way of propaganda now and every day in peace to stimulate the morale of the nation and the nation's pride in its armed forces. Military tournaments, torchlight tattoos, naval reviews and air force pageants are all valuable means to this end. The British Legion, the Boy Scouts, Girl Guides and similar organizations, are of the highest possible value in this connection, and it is our duty as soldiers to give them every possible help and encouragement as opportunity offers. The soldier should be continually at work educating his civilian brother in the nation's military needs. National registration is our first requirement, industrial organization to meet war-time necessities is the next.

In preparation for both of these the soldier must play his part, as he will be the first and greatest sufferer if exhaustion should overtake us in the next great war.

APPENDIX 6

SOME NOTES IN CONNECTION WITH PETROL SUPPLY
IN WAR.

1. Weights and Measures.

- 1 2-gallon tin of petrol, full, weighs 18 lbs.
- 1 2-gallon petrol tin, empty, weighs $5\frac{1}{2}$ lbs.
- 1 case of petrol holding 4 full tins (8 galls.) weighs 100lbs.
- 22 cases of 176 gallons equals 1 ton gross weight.
- 1 3-ton lorry carries 300 2-gallon tins not in cases.
- 1 30-cwt. lorry carries 200 2-gallon tins not in cases.
- 1 G.S. trailer carries 16 cases (128 gallons).
- 1 gallon of petrol (bulk supply) weighs 7 lbs. 4 ozs.
- 1 10-ton covered railway goods wagon can carry 1,280 gallons in tins in cases.

2. Circuit of Action with Amount of Petrol normally carried in War.

Heavy lorry	...	...	...	91 miles.
Light lorry	...	...	...	144 "
Motor vans	...	...	...	108 "
Motor ambulance—Heavy	...	...	...	108 "
Light	...	...	...	150 "
Light Tank—By road	...	...	...	180 "
Cross country	...	...	...	145 "
Dragon—Mk. II	...	...	...	69 "
Mk. III	...	...	...	46 "
Rolls, Armoured Car	...	...	...	150—160 "

3. Types of Petrol required.

- (a) M.T. petrol all ordinary purposes.
- (b) Mixture 75% Grade 1, 25% Benzole for tanks and dragons.
- (c) Aviation spirit for R.A.F.

All above must be stored and carried separately.