

Jean de Bloch: ***Selected Articles***

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FOREWORD

Ivan (Jan) S. Bloch was a prophet. A Polish Jewish banker and railroad financier when Poland was a province of the Russian Empire, Bloch compiled an extensive, detailed analysis of the potential effects of a great power war at the end of the nineteenth century. Bloch's work was published in several languages and was widely known and discussed prior to World War I. It was most influential in the international pacifist movements. Bloch's conclusion was that a war between major powers had become too

costly to contemplate, that war in the future would bankrupt the countries who engaged in it rather than produce any worthwhile result. Dr. Chris Bellamy has written an excellent critique of Bloch's major work in the April 1992 *RUSI Journal*, "Civilian Experts' and Russian Defence Thinking."

The essays reprinted here are shorter statements of Bloch's basic beliefs. As Bellamy points out, Bloch was not entirely right in his views on war. He failed to note the heavy influence that indirect fire would have on World War I battlefields. Obviously, he could not anticipate new technologies such as the airplane and tank. Bloch was more correct in addressing the inability of major combatants to find a war ending strategy -a military solution to their political conflicts -before they bankrupted themselves in the process of conducting a major war.

In his announced and optimistic belief that war was now impossible, Bloch was, of course, quite wrong. He assumed a level of rational decision making that likely still exceeds the human condition. Whatever the situation of the day, then, the military professional still had to fight the war he was given or, in some cases, helped produce--notwithstanding Bloch's theorizing. These essays are reprinted as an example of one man's anticipation of the next great war in the hope that it may encourage a foresight by today's military professional equal to that of the nineteenth century's greatest amateur.

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Institute



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THE WARS OF THE FUTURE.

INTRODUCTION.

Having busied myself for over fourteen years with the study of war in all its phases and aspects, I am astonished to find that the remarkable evolution which is rapidly turning the sword into a ploughshare has passed almost unnoticed even by the professional watchmen who are paid to keep a sharp look-out. In my work on the war of the future I endeavoured to draw a picture of this interesting process. But writing for specialists, I was compelled to enter largely into details, the analysis of which ran into 3,084 pages.* The facts which are there garnered together, and the consequences which flow from them, run too strongly counter to the vested interests of the most powerful class of the community to admit of their being immediately embodied in measures of reform. And this I foresaw from the first. What I could not foresee was the stubbornness which not only recoiled from taking action but set itself to twist and distort the facts. Patriotism is

highly respectable, but it is dangerous to identify it with the interests of a class. The steadfastness with which the military caste clings to the memory of a state of things which has already passed away is pathetic and honourable. Unfortunately it is also costly and dangerous. Therefore I venture now to appeal to the British masses, whose vital interests are at stake and whose verdict must be final.

*Of the French edition of my work. Vol. I.: Description of the Mechanism of War. Tactics. Vol. II.: The Preparations for War. The Conduct of the Army. Battles. War against Fortresses. The State and Spirit of Armies. Resistance to the Social and Economic Influences of War. Plans of Campaign. Vol. III.: Naval Warfare, Vol. IV.: Economic Disturbances. Material Losses which, in the future, War will involve. Effects of Tactics and of Economic Conditions on the Victualling of Armies. Vol. V.: Efforts tending to suppress War. The Causes of Political Misunderstandings. Losses in Human Lives. Vol. VI.: Summing up of the Mechanism of War and its Working. The Case for and against the possibility of settling peaceably by means of an International Tribunal the Disputes that crop up between European States.

From *The Contemporary Review* 80 (September 1901):305-32.

The only Great Power whose representatives have profited by the teachings of the Transvaal War is Great Britain, and the earnest warnings uttered by the Brodricks, Curzons and Campbell-Bannermans show that the significance of that campaign has been read aright by British civilians. The military men even in England seem bound by a sort of *point d'honneur* to defend the past rather than be guided by the present.

By no Parliamentary Commission has any measure been suggested embodying the reforms rendered necessary by the changed conditions as exemplified by the South African Campaign. Even in military circles these changes have been appreciated in words rather than in measures. Lord Roberts himself, whose well-earned popularity lends enormous weight to his every utterance, seems disposed to content himself with propping up the old fabric rather than constructing a new one. In his eloquent appeal to the patriotism of the British people to erect shooting stands for the training of efficient marksmen, the eminent Field-Marshal gave it as his opinion, that in coming wars success would follow good shooting and dexterity in seeking shelter during the advance to the attack. The idea, I admit, is good in itself; the main drawback attaching to it is the impossibility of realising it.

On purely economic grounds-and this is a subject on which I can speak with perfect *connaissance de cause*-the scheme is not feasible. A war waged with such tactics would ruin both belligerents, financially and economically, long before the end would have come in sight.

This Laodicean attitude of politicians, and the vehement opposition of military men, have determined me to address the general public, setting before them the innovations which have altered all warfare and rendered it henceforth useless as a means of settling international disputes, and the grounds which render the average military mind hostile to all reform. The technical aspect of war is no longer what it was; the changes it has

undergone are as great as those which steam achieved in inter-oceanic traffic. High military authorities recognise these changes and endorse the conclusions which I have drawn from them. From a purely technical point of view, then, I hope to prove that war, as a means of deciding misunderstandings between nations, is no longer efficacious.

But even if technical reasons were less convincing, economic considerations would still be decisive. The military machine is no longer isolated as of yore. It is closely connected with the financial and economic machines not only of the countries waging war but of all other nations. The one cannot be set in motion without the other; and as the economic forces of a great Power fall very far short of its military strength, it is the former that will ultimately decide the issues. Now there is no State in Europe or in the world whose economic resources are sufficient or nearly sufficient to allow of the full utilisation of its military strength, or even of the employment of a considerable portion thereof, for the length of time that a war under present conditions must last. In this fact, which I am prepared to prove to the satisfaction of the most exacting critic, lies the key to the whole military question. Technical science has forced even conservative generals to the same conclusion. But even if its premisses be suppressed or its conclusions denied, the fact still remains that though the sword be sharp and trusty, the arm that wields it will be paralysed long before it has struck a decisive blow.

If in addressing myself to the task before me, a word or expression should perchance escape me to which a member of the military profession might reasonably take exception, I trust it will be indulgently set down to zeal for what I hold to be the truth, and my assurance accepted that no motives less impersonal have inspired my action or shaped my utterances.

Military science has from time immemorial been a book with seven seals, which none but the duly initiated were deemed worthy to open. Institutions of the Army, like those of the Church, were taken under the protecting wing of the State and flourished all the more luxuriantly in the shade. It was the duty of the masses to pay the bill in men and money, and the privilege of governments or monarchs to spend or misspend both, according to the lights of their reason or the vagaries of their will. Criticism of the means employed and discussion of the ends aimed at were alike forbidden to the outsider. It is hardly credible, and yet it is a historic fact, that no priestly caste, since the days of the Pharaohs, has managed to remain so exclusive, so powerful and so secret as the men whose profession it is to kill or be killed. While the wholesome light of publicity has in the course of ages poured in upon and purified all other corporations and adjusted their organisation and their workings to modern conditions, the warrior-caste has alone succeeded in shutting out the light of day and carrying over the prejudices, abuses and cruel usages of a barbarous epoch into the refined atmosphere of the 20th century.

Much that calls for censure in the militarism of to-day was excusable, if not justifiable, in bygone generations. The army was an instrument which the heaven-sent monarch was alone qualified to wield. All rights descended from him, while he was himself responsible to no man. His soldiers fought for his aggrandisement or his pleasure, suffered for his safety, died for his "glory." The whole religious and social groundwork of this cruel

Moloch worship has long since been ruthlessly swept away, and the new ideas and altered aims call for different and more humanitarian methods. Yet the horrible human sacrifices are offered up at the blood-stained altar now as of yore; nay, they were never so numerous, so soul-scathing, so utterly wanton as they are to-day. And the caste that presides over the ceremonies is invested with special privileges, removed from the reach of criticism and in some countries raised above the law itself.

It is not what men know that calls forth their energies and determines their action, but what they realise. And there seem to be very few who grasp the fell significance of militarism in contemporary civilisation. Yet it is the worm in the blossoming plant, the serpent in the soft green grass, the poison in the sparkling wine. There is not a politician, a journalist, or even an officer who would venture to come forward and lay down the principle that a modern army is a body of regular troops trained for the behoof of the government, and shielded thereby from public criticism and merited censure. The notion would be scouted and he who broached it would be laughed at as a harmless faddist. Yet in reality this antiquated and dangerous principle is daily acted upon on the Continent of Europe, and in some countries he who should ignore it in practice would run the risk of being dealt with as a traitor. A contemporary soldier doffs his citizenship before donning his regimental uniform. He feels himself less a defender of his fatherland than a servant of his king, whose livery he wears. He must learn to think of his non-military fellow citizens as possible enemies against whom his rifle may be levelled tomorrow. In fact, the arms he bears must be employed by him in any cause, against any idea, in favour of any injustice. He may not reason, even though his motive be the welfare of his order. He may not criticise, though the abuses he would censure are calculated to defeat the ends which armies are expected to attain. Secrecy is the magic word that seals all lips and shuts all eyes. Officers who possess insight to perceive and courage to condemn errors that may lead to a national disaster are marked men. Their criticism is labelled insubordination, their demand for reform is confounded with disaffection, and their career is ruined. The normal military man is expected to follow the example, without having the justification, of the Spanish soldiers in South America, who, when crossing a broad and rapid river under cover of the night which hid them from their foes, received from their leader the historic order: "Keep the silence of death whether you swim or drown. Let all who may be in danger die without uttering a cry for help or a prayer for salvation. Thus and only thus can their comrades hope to live."

It is thus that military men are expected to watch the approach of grave dangers without uttering a warning cry. They must have arms to strike, but no eyes to see and no tongue to speak. Hence there never was a caste in Egypt or India, a secret society in Italy or China, nor a religious congregation in any church whose organisation ran counter in the same degree to the well-being of civilisation. Militarism has long possessed this character, but never so fully as to-day. In the eighteenth century the famous Captain Maurice of Saxony, the natural son of King Augustus II. of Poland, said: "The art of war is wrapped in obscurity, and in this obscurity it is impossible to move forward with a firm step. The groundwork of military organisation seems to be routine and superstition, both daughters of ignorance." What, for instance, could be more superstitious than the firm belief felt or professed, that absolute secrecy on all military matters is of such

paramount importance that if any scrap of information even casually leaks out, the fatherland is at once in danger. The notion is so crude that to analyse it is to dispel it for ever, and yet it is systematically encouraged by the legislator, the journalist, and the officer. The fact is that all our ideas on military subjects are polarized and need to be translated afresh into the language of everyday use.

Take the questions of secrecy and espionage for instance. Of late years most continental countries have intensified the pains and penalties attaching to all who reveal secrets of the national defence. A traitor is in truth a most contemptible character; but his power of harming has been absurdly exaggerated. I felt convinced of this for a long time before I reasoned it out with the commander of one of the greatest fortresses in Europe, or the world, a General whose name is a household word in both hemispheres. He and I entered into conversation one day on the part which fortresses are destined to play in the war of the future, and I availed myself of the opportunity to ask him his opinion about the harm done by spies. "For my own part," I remarked, "I fail to see what they can tell a foreign Power that is not already to be found in print." "There may be certain details," replied the General. "Granted there may be," I insisted, "are they of any real importance when you take into account the great range of artillery fire and the terrible destructive force of shells?" "Well, I confess I cannot see that they matter one jot one way or the other, all the more that as soon as war is declared all the arrangements made in peace time will forthwith be changed, and nothing left as it was before." "Then you agree with me?" "I most certainly do. The facts leave room for no two opinions."

The civilian who is free to ask questions about military matters does so at the risk of his political good name, and with the certitude that he will not be vouchsafed an answer. However patriotic his motives, he is frowned down as an impertinent busybody, and perhaps talked of as a friend of his country's foes. Even the citizen who has devoted himself with success to the study of military science, without any *arrière pensée*, is rudely told that the ground he treads is holy and reserved for the initiated. It is thus that the Army is wrapped up in swaddling clothes and protected from the light of day. Yet the donning of the military uniform is hardly a sacramental act which confers divine grace and deeper insight upon the many who are called to it. To claims of this nature modern times are not propitious. Theology itself has been thrown open to laymen, and some of its most authorised exponents to-day stand outside the sanctuary. But the trail of the old serpent still lingers over the military caste.

"Yes, but we have changed all that in England," exclaimed a British politician, to whom I was recently unfolding my views on the subject. "For many generations," he added, "our soldiers have formed a national army. They are citizens first and soldiers afterwards. They are not, as in some countries, the servants of an individual, however exalted, but the defenders of the people."

It is pleasant to hear a statement of this kind, were it only for the sake of the broad humanitarian principle which is implicitly approved therein. But over and above this extrinsic consideration, there is much truth in the assertion. Much truth today; but if the present tendency continues, there will be rapidly less and less. For even England is

being very gradually, I had almost said imperceptibly, drawn towards the maelstrom of militarism, and I lately heard without surprise a gallant British officer remark: "It is our wish to be the army of the King, and to wear his Majesty's livery." There is no reason why this wish and all that it implies should not be fulfilled one day, and still less why an outsider should feel aggrieved thereat. If the consequences are realised and taken, the transaction is fair and valid. But are they thoroughly understood? Are there no illusions, no misunderstandings?

Much has changed of late years, and comparatively little has been done to bring home to the minds of the masses the meaning of those changes. If the art of war was obscure to the generation of Maurice of Saxony, it is a sphinx' riddle to our own. A relatively short time ago an army was a body of men set apart for a special purpose; it was not the entire adult male population. The pursuit of arms was a career to which a man devoted his whole life, not one of the many burdens of citizenship. The monarchs who paid the troops studied their organisation and needs, and had reports on the subject drawn up for their own use. The knowledge thus acquired they kept to themselves, nor was there any good reason why they should let the world into their secrets. War in those days was a purely military event, the trial of political issues by the shock of contending armies. Its economic aspect was a matter of hardly any moment, and its incidence was always merely local. A soldier then needed above all things courage, that being the alpha and omega of success. Heroism was paid for in current coin, and in such "immortality" as stone monuments could confer. One battle often decided the issue of a war, and a spirited bayonet charge generally determined the result of the battle. Two surging masses of armed men stood facing each other, while the strains of martial music thrilled their hearts, fired their blood and dimmed their reason; one of them dashed brilliantly forward beating down all that came in its path, the other made a stand, swayed, gave way, and finally hurried helter-skelter from the spot, leaving the field and victory to the enemy. Romance and poetry idealised the deeds of prowess which imagination and music had inspired, and military history supplied literary fiction with some of her most attractive heroes.

All these conditions are now radically changed. The romance of war has vanished into thin air with its gaudy uniforms, unfurled banners, and soul-stirring music. Military operations have become as prosaic as ore-smelting, and far less respectable. Armies of to-day -are not composed of gallant, jovial cavaliers, but of entire peoples who curse the fate that compels them to abandon their trades, industries and professions, thus depriving their families of help and throwing an enormous extra burden upon the State which has to maintain them in idleness at a time when the sources of public revenue are drying up and the necessities of life are more costly than before. The economic aspect of the matter has become formidable, because international. The belligerents suffer more than their neighbours; but all other nations are likewise affected by the stagnation of trade and the slackness of industry. The necessity for secrecy respecting army organisation no longer exists. The peoples who now-a-days have to bear the brunt of battle possess the right to know whether the conditions under which they are called upon to fight are such as to give them a chance of substantial success, a reasonable hope of achieving the only ends which warrant the sacrifice's demanded by war. And if

no such prospect can be held out to them, they are justified in casting about for some less costly and more efficacious method of settling disputes. Even the courage which down to a short time ago was the *open sesame* to military success is become a drawback rather than an advantage. Prudence, initiative, independence have taken its place. Further, a war can never again be decided by a single battle, and indeed it is very doubtful whether battles in the old sense of the word are any longer possible. Excellent military authorities affirm that they are not, and brilliant bayonet charges are most certainly things of the past which can never be recalled. War itself is no longer the exclusive concern of the belligerents. It is an international calamity, and even now some of its worst effects have to be warded off or assuaged by international pressure put upon the belligerents, as for instance in the questions of determining what may be declared contraband of war, what reasons can justify the stoppage and overhauling of neutral vessels, etc. From this it is but a step to the prohibition of certain wars altogether by the majority of nations on the ground of the widespread calamities that would follow in their train. And this thin end of the wedge once driven in, the remainder would follow in due course. If a Peace Congress cannot compass the end, the force of circumstances will and must. For the vital interests of nations are all closely interwoven as they never were before, and, like people joining hands with him who receives an electric spark into his body, they all feel the shock. As soon as they perceive that the hardship is more than they can reasonably be expected to bear they will find ways and means of putting a speedy end to the war, whatever the belligerents may think and feel on the subject.

On the principle that certain prevention is better than possible cure I have striven to bring home to the minds of the people the consequences with which these changed conditions are fraught, before sorrow, suffering and possibly ruin, teach a lesson that will have been learned too late. That this forecast is not the fanciful notion of a faddist is made clear by the emphatic confirmation which my views have received wittingly and unwittingly from some of the most authorised spokesmen of the armies of Europe, and which can neither be reasoned away nor ignored. Among many others I may mention the opinion expressed with no uncertain accent by Count Miliutin, whose name commands the respect of all his colleagues throughout the globe. This general was the Russian War Minister for the space of eighteen consecutive years. During his long and memorable tenure of office, he completely reorganised the army of the Tsar. His right to be heard on the subject is therefore unquestioned, and the gist of his teaching differs nowise from mine. In fact he said as much expressly in a letter he addressed to me before the opening of the Hague Conference. "The main object of your work [on the Future War] has been to draw a picture, faithful but terrible, of that war which in a future more or less near will ruin Europe in order to allow recent inventions to be utilized. For that very reason your book would have an immense and beneficent effect if it could influence the directing spheres, the men who shape the policy of States, and, above all other, the Delegates to the Conference at the Hague. This, however, is unfortunately not to be hoped for: the appalling consequences which may be expected to follow the catastrophe are not capable of turning back the obstinate fanatics of militarism from the road which they have mapped out for themselves."

Now I hold that those appalling consequences, the contemplation of which leaves "military fanatics" unmoved, would be warded off by the people on whom they would fall, if only the public could be got to realise them; and that in order to grasp them thoroughly one has only to dwell upon the established facts which render such war as is still possible utterly unlike what we have hitherto known as war, and to bring to that study an open and unbiassed mind.

The difference between the wars of the past and the future is not one of degree only; it is specific, an event of a wholly different order. This transformation is the outcome of a number of other changes in the conditions of political, social and industrial life, in the progress of applied science, in the facilities of inter-oceanic and inter-continental commerce, in the minute division of international labour and in the interdependence of all civilized peoples. In a word a gradual evolution has been taking place for years, the significance of which is only beginning to be read aright now that it has reached its ultimate stage. Each succeeding process has been studied apart from all the others, for lack of a master-mind to perceive their common bearings and to draw the consequences to which they pointed.

Those consequences affect the character of armies as levers for removing the hindrances that occasionally crop up to the maintenance of a good understanding among States. It is with militarism as with a pretty woman, the beauty of whose form and the radiance of whose smiles have continued to delight a large circle of admirers for several decades, and to whom the fact finally comes as a poignant revelation that she has played her part and is henceforth *passée*. Warnings she has had, many and significant, on her journeys to the dentist, the oculist, and other specialists. But she dismissed each one separately as if they had no connection with each other, until at last she found them focussed in one burning point.

War, by its nature, is an experiment, and in the days when it was a trial of brute force practically unaided by science, the knowledge underlying military skill was gleaned solely from experience. Hence former wars supplied lessons for those of the future, just as the success and failure of the haphazard treatment applied to disease by mediæval physicians served to guide them in their choice of methods. It was right and proper, therefore, that military men should look upon past history as the only source of light for future action. But that was in the days before the great evolution, of which I have just spoken. Nowadays it is an anachronism. Yet they are so saturated with reverence for the past that they refuse to see that the caterpillar has become a butterfly, and is amenable to other laws. They are so purblind that they seek to batter a breach in scientific principles by brandishing musty precedents, which have no longer any relevancy. Science and civilisation have turned over a new leaf, but the man of arms keeps his eyes fixed on the old and faded page, neither learning nor forgetting. Of striking examples of this pathological fact the military history of the past thirty years is full.

Thus the American War of Secession made short work of the theory which regarded thorough military training as the source of all superiority. Theretofore it was a defined

dogma that the soldiers who had been through the mill and were become so dependent upon their officer that they moved only at his word, and followed him as needles do a magnet, were the stuff of which victorious armies are made. Raw recruits were but as chaff among grain in comparison. The Yankees were forced to employ this "inferior" material, and to put their trust in the intelligent civilian; and, to the astonishment of all men, he stood the test remarkably well. In most emergencies he left the professional soldier far behind. He kept his head in moments of panic, was cool when danger assumed an unwonted form and was resourceful in unforeseen emergencies, when everything depended upon his individual initiative. This was established by the War of Secession. But the crusty old professional not only refused to draw the consequences, but deliberately shut his eyes to the facts. "Those savage encounters do not deserve the name of war," exclaimed a well-known European General, "and I have dissuaded my officers from reading the published accounts of them."

Hostilities broke out in 1866, which claimed the glorious name of war, and had their claims duly allowed, but not their lessons taken to heart. These were mainly two: the stupendous force of a homogeneous national army like that of Prussia, before which the vaunted drill and discipline of the Austrians were but as a feather in the stormwind; and the superiority of the needle gun. Yet Austria had been warned before, having gone through the campaign against Denmark as the ally of Prussia; her military chiefs had seen the needle gun in action, and had had time enough to take the hint and make themselves ready for an emergency. But use and wont had blinded their eyes and paralysed their energy: *vis inertiae* is a wonderful thing; when allied to military conservatism it is one of those mountains which even faith fails to remove.

In the year 1870 military routine had its innings again, and reduced a gallant people to the brink of national ruin. The marshals, generals and staff officers of the third Empire were implicitly trusted by the whole population, whose earnings they squandered. They declared publicly, solemnly, repeatedly, that they were prepared. They heard the wild cries of a frenzied people: "à Berlin! à Berlin!" without moving a muscle, without uttering a word of warning. Yet they might, nay, they must have known, that while Germany would put 1,200,000 men in the field, France could not operate with more than 330,000. The French general staff were well supplied with maps, but they were maps of German districts on the route to Berlin. They were meant for an invasion; they lacked the maps that would have helped them when France was overrun by Teuton soldiers. Yet they had been warned over and over again by their own military attaché in Berlin. Colonel Stoffel had had the courage to communicate the facts and to call things by their names. But his Cassandra voice was drowned by the premature pæans of his colleagues, and was heard only by the unfeeling historian.

But the Franco-German campaign was at least instructive. Among other novelties, earth entrenchments as a powerful factor in war made their successful appearance when 48,000 Germans managed by their help to defend triumphantly a line extending over 35 kilometres against 131,000 French troops, whose attacks were seconded by an artillery fire which was three times more powerful than that of the enemy, and inflicted a loss of human life six times more considerable. Again, the story told by the number of killed and

wounded, when carefully disentangled from a skein of irrelevant statistics, was in the highest degree interesting. Only 180,000 Frenchmen were engaged in active fighting; yet in the course of a month and a half they put 87,000 Germans out of the ranks mainly by rifle bullets-for the French guns were so defective that they inflicted scarcely any damage. The loss thus inflicted therefore amounted to 50 per cent. No wonder that in view of this alarming spectacle eminent military authorities should ask themselves whether, if future wars be waged at this cost of human life, the armies engaged can support them.

But the men who raised this question had no appreciable influence upon those who were called upon to give a practical answer to it. General and staff officers, their eyes riveted on ancient history, continued to contemplate the wars of the future in the light of the battles of the past, and the Russo-Turkish conflict found them ready to be astonished anew, but as impervious as ever to the teaching of facts. One incident connected with that war is deeply engraven on the tablets of my memory, and, as it is characteristic of the military spirit of all times and countries, I need offer no apology for narrating it. I was then president of the Kieff-Brest Railway Company, over whose line the great bulk of the Russian Army was conveyed to the scene of war. The Tsar, Alexander II., also used it to rejoin his troops. I was in charge of the imperial train.

One morning the train was suddenly brought to a standstill in order to give His Majesty an opportunity of shaving. The distinguished passengers alighted to get a whiff of fresh air, and found themselves in the centre of a rural district far from human habitations. Walking by the side of the rails, I entered into conversation with the Generals *à la suite*, and amongst other topics we discussed the prospects of the future war. The Generals foresaw its course, consummation and duration distinctly. "Well, and what are you going to do," one of them asked me, "after you have escorted us to our destination?" "I shall go off to Karlsbad and take the waters there," I answered. "You surely don't mean it! Why we shall be coming back to St. Petersburg too soon to permit of your going so far away. We shall return in two or three weeks from now." "What?" I exclaimed, "you already foresee the moment of your return?" "Certainly we do. You see our expedition will resolve itself into a mere military promenade." Less optimistic than the Generals, I repaired to Karlsbad without present hesitation or subsequent regret, for events showed me that I was not mistaken in my forecast.

I was not surprised that the campaign should have lasted a twelve-month. What was far more astonishing to me was the belief fondly cherished by specialists who had facts, figures and reasoning powers to guide them, that they would decide the issue by a simple military walk over. For the mobilised forces amounted to no more than one-third of what was absolutely indispensable. There were other unpleasant surprises in store for them, which forethought and freedom from bias would have enabled them to foresee and ward off. Thus they paid a terrible price for the needless repetition of the lesson taught by the 48,000 Germans of the Franco-Prussian Campaign, that entrenchments impart a power of resistance to the defence out of all seeming proportion to numbers. That lesson had not been lost on Osman Pasha. This general was no carefully-trained nursling of a great military academy, no scientific strategist; he was, in fact, a mere

barbarian as compared to his opponents. But, on the other hand, he was a man with open eyes and unbiassed mind. He profited by the painful experience of the French troops in 1870, constructed an entrenched position around Plevna, and for four months held in check a Russian force four times more numerous than his own. The first onslaught against this common-sense soldier cost the attacking force 36 per cent. of the men engaged. That result should have sufficed to prove the point and render further trials superfluous. But it is easier to kill than to convince, and a second effort was made, which ended in 26 per cent. of the Russian assailants being cut down. And, as if that proved nothing in particular, a third time our soldiers were led to the attack, and left 20 per cent. of their number on the field. And the chiefs who thus ignored the advantages of entrenchments, had not a single spade or other trenching tool in the army. Bayonets had to take their place.

This appalling loss of life was not the result of miscalculation or of belief in a mistaken theory. It was the outcome of narrow prejudice, and of an irrational faith in worthless traditions. They had seen the value of entrenchments tested on the field of battle, under crucial conditions. Yet in this their own special sphere of activity, from which they so zealously exclude civilians, they gave—as they still give—proof of such blameworthy shortsightedness and naive faith in fetishes, that public confidence in the judgment of general staffs is utterly undermined.

If an object-lesson like that made such a very slight impression on military minds, technical inventions tested only at manœuvres produced still less. The invention of smokeless powder in 1886 and the adoption of the quick-firing rifles effected as great a revolution in contemporary warfare as the introduction of printing with movable type accomplished in the caligraphic and illuminating arts of the Middle Ages. But these innovations only excited curiosity, without arousing misgivings as to the ultimate consequences. These were not foreseen, not suspected, not deemed possible. Military men resemble, in this respect, the unpractised chess-player, who is satisfied only when his king is so situated that he cannot move out of check, whereas the professional perceives mate ten moves ahead; and thereupon frankly acknowledges defeat. Great is the conservatism of staff officers, and childlike the trust of rank and file in the thaumaturgic power of the past over the present and the future. Even when the experiments of inventors were repeated on the field of battle, and smokeless powder and quick-firing rifles were tested in the Civil War of Chili, the results were merely recorded and wondered at, but their bearing upon the wars of the future was practically unheeded. The troops of the Congress during that deplorable struggle were partly supplied with the new rifles and partly with the old ones, so that the conditions were uncommonly favourable and the results striking. The President's forces lost 82 out of every 100 men who stood opposite the quick-firing rifles, whereas the old weapons put only 34 per cent. out of the ranks. And it should be clearly borne in mind that the men who handled these weapons with such fearful effect were not thoroughly-trained soldiers, but recruits, who had been but a fortnight with the colours.

Those phenomena spoke for themselves, and in every other profession analogous facts would have been sifted, studied, utilised. But governments could not afford to see, and

were, therefore, blind; and when, here and there, some eminent military writer uttered a cry of warning, they were incurably deaf. For here and there an authority in military matters, listening to the dictates of reason and the demands of patriotism, proclaimed the dawn of a new era when war would be incompatible with the changed conditions of civilized society, useless as a means of ending disputes, and therefore obsolete by the natural force of things. Other and younger military men, going deeper still into the roots of the matter, dwelt with predilection on the master-fact of the new situation, that defence is become more formidable than ever before, and that it will be still further strengthened to such a degree that the attack cannot hope to strike a decisive blow or inflict a telling defeat. Under those conditions, they added, to invade a foreign territory would be to court a danger so formidable that before venturing to incur it governments would eagerly clutch at every other conceivable means of settling their disputes. And if war were finally resorted to, the battles would be long, bloody, indecisive; while a few writers boldly affirmed that a battle in the usual sense of the word would be wholly out of the question.

And those views were supported by arguments which have never been answered, and which seem destined to crop up one day in the form of dearly-bought object lessons like that of Plevna. The difficulties which must arise, for instance, in consequence of the lack of intelligent officers were pointed out and admitted without comment. Contemporary armies are so numerous, so unwieldy, that the wealthiest State cannot afford to maintain officers enough qualified to command them. Professor Coumès, who has given this subject his most careful attention, says: "In order to command the infantry on the field of battle, it is indispensable to possess so considerable a degree of skill that among 500 officers there are but one hundred capable of leading a company into fire." And if this be the sorry condition of subalterns, that of commanders, whose task is incomparably more arduous, leaves far more to be desired. A habit of taking the initiative, a capacity for adapting themselves, to new circumstances are essential conditions of fitness in those who would direct the operations of an army corps. Is it reasonable to look for them in contemporary commanders, whose inborn talents have been crushed out in the mill of army discipline? As well expect figs to grow upon thorn bushes. The highest qualities in an officer who aims at receiving a responsible post in the army are such as unfit him for assuming responsibility. He must learn to stifle his independence, to suspend his judgment, to display absolute dependence upon and blind trust in the judgment and resources of a superior officer whose mental and moral stamina he knows to be inferior to his own. And when he has successfully rooted out the only qualities which would have qualified him to command, he is appointed to the highest post of trust and responsibility. Is such a man born again when promoted to the rank of general? Is it to be assumed that the gifts which have been systematically uprooted will be mysteriously supplied by some divine grace dispensed by the god of battles? In vain do we ransack the history of human institutions for a parallel to this criminal contempt of the dictates of common sense. But the fact remains, and must be reckoned with, that out of 500 officers scarcely 100 are qualified to lead a company into fire, and out of ten generals, probably not more than one will be found resourceful enough to enable him to steer clear of the appalling risks to which the new order of things will expose him and his forces. Finally, it should not be forgotten, when

forecasting the character of future wars, that only one-fifth of the officers of the regular army will actually march to the front, and that the remaining four-fifths must stay behind to form the cadres of the reserves.

Such was the case against war, as stated by specialists who have studied the subject on its own merits, and with a strong bias in favour of use and wont. It called for a thorough investigation and a readjustment of means to ends. But the facts adduced were wilfully ignored, and the consequences drawn from them deliberately and flatly denied by governments whose duty it was to safeguard their subjects at least from wanton destruction. All civilized States profess to consider war as an odious means of compassing a possible and desirable end. If the means become ineffective, its employment is a crime of the darkest hue. And when generals whose word admittedly carries weight come forward to proclaim to the world that war, which was ever horrible and hated, has now become inefficacious as well, the peoples who are destined to be led like sheep to the slaughter have the right and the duty to see that new methods be substituted for the old which have lost their *raison d'être*.

The indictment against war is all the more overwhelming that the witnesses who have come forward in support of it are themselves eminent members of the military profession. Each of them started from a different point of view, but they all converge towards the same point. General von Janson, impressed with the growing superiority of defence and casting about for means of neutralize it, is forced to the conclusion that "every attack will last at least two days, and the assailant can only hope to succeed if the defenders lose their heads," a consummation which cannot reasonably be hoped for, seeing that they will be under shelter and will have put barbed wire entanglements and a death-dealing hail of bullets between themselves and their enemies. General Schlichting, whose attention was absorbed mainly by the part which hastily-improvised entrenchments will play in future struggles, announces in plain terms that "the spade will change tactics in the coming war, and taking into consideration the present improved weapons, it will itself become an arm of immense importance. For the purpose of prolonging resistance, trenches constructed against the offensive operations will often render greater services than permanent fortifications."

The truth is that the old system of tactics has been swept clean away, while the men of use and wont are still clinging fondly to its memory. The well-known Prussian General, Müller, whose standard writings are highly appreciated in the land of militarism *par excellence*, makes short work of the complicated tactics heretofore followed. He says that in order to escape utter destruction "the men will have to march forward in scattered order, and, for the purpose of withdrawing themselves as much as possible from the sight of the enemy, must advance crawling or creeping along the broken ground like moles." At this rate, one may fitly ask, how long will a battle last, and how much will a soldier be able to endure? The French General Langlois, replying to the first of these questions, says that a battle will take up five days, will be to all intents and purposes an artillery duel, and that each gun will need to have at least five hundred projectiles. Generals Rohne and Müller supply formulas which are calculated to make one shudder, and are based on the destructiveness of the quick-firing artillery weapons of to-day,

which represent a force forty times greater, gun for gun, than in 1870. If, say these authorities, the armies of the Triple Alliance were to contend in the open against those of France and Russia, they could dispose of shells enough to kill or wound more than eleven million men. And these potentialities are independent of the murderous work which the rifles could accomplish. Is it surprising that, with these lethal machines and the effect of barbed wire entanglements before their eyes, some military writers have struck out the word battle from the vocabularies of the future, because a battle in the sense of a sharp contest ending in the victory of one side and the defeat of another is henceforth inconceivable?

General Liebert, a celebrated German authority on tactical questions, puts the matter in a nutshell as follows: "In former times men said: 'The battlefield is ours; the enemy is put to flight, let us cut him to pieces!' To-day the infantry which will have undergone for half a day the destructive fire of a contemporary army will be powerless to act, and in consequence of the enormous space occupied by the forces, the reserves that come up at the close of the combat will no longer be fresh." Other authorities forebode a return to the days of wearisome sieges, and hold that if States insist on going to war we shall have a repetition of the scenes of Belgrade, Mantua, Plevna, with accessories of a new and terror-striking character. The assailant, despairing of winning a decisive victory, will seek to shut up the defender in the position in which he finds him by throwing up entrenchments. He will then make a series of sallies, with a view to hinder all attempts at revictualling until the besieged are forced by famine to surrender. If there be truth in this picture, and it bears the names of some of the lights of military science, what duration are we not warranted in assigning, on purely technical grounds, to the wars of the future?

Even before the conditions of warfare had undergone all the changes that have been introduced since the invention of smokeless powder, Field-Marshal von Moltke put the following remarkable statement upon record in his Memoirs: "We admit that the Thirty Years' War or the Seven Years' War will never be rehearsed again. Yet when millions of men array themselves opposite each other, and engage in a desperate struggle for their national existence, it is difficult to assume that the question will be settled by a few victories."

Those are some of the authorised statements of eminent specialists. Looking at the matter from the point of view of tactics, they all agree in this, that warfare is no longer what it was, that if carried on in accordance with the old principles it would end in the slaughter of millions, whereas if waged on the only lines possible to-day, it will drag on for years, and never culminate in a decisive action. In other words, on technical grounds alone, war as a means of settling international disputes by might if not by right, is a thing of the past.

But even were it otherwise, were it possible on technical grounds to wage war as before, economic considerations put their absolute veto on it, and from this decision there is no appeal. This aspect of the question is one that seldom appeals forcibly to the military man, whose horizon is bounded by the drill ground and the battle-field; and

while he has been busy, like Archimedes, with his theories and calculations, economic laws have forged an iron ring around him which no force can break. Even this finger of fate has been perceived by a few of the farsighted among officers, and its words of warning read aright. The German General von der Goltz writes: "The economic resources will dry up before the armed forces are exhausted; for operations in France must necessarily have a wearisome character. A war against Russia will need many campaigns before it culminates in any result whatever.... One may safely say that wars cannot end otherwise than in the utter annihilation of one, or the complete exhaustion of both belligerents."

What statesman, journalist or general will undertake to point to the commercial or territorial gain which would be cheap at that price?

Yet governments turned a deaf ear to those warnings, fostered political jealousies and national hate, and squandered milliards of hard-earned money in preparation for the war that had become impossible. Disaffection among the heavily-taxed peoples became rife, the stream of emigration continued to swell, and the ranks of socialism were recruited from the masses who, remaining at home, were forced to bear the crushing burden on their shoulders. It was at this juncture that His Majesty the Emperor of Russia threw the weight of his potent word into the scale of justice and humanity, and offered the world a golden opportunity to devise efficient and bloodless methods of solving disputes which war had become powerless to settle. The Hague Conference was summoned in order to stay the development of armaments, which, like some colossal vampire, were sucking the life-blood of peoples and undermining the fabric of civilisation. The circular letter says: "The financial charges, progressively increasing, strike a blow at public prosperity in its source. The intellectual and physical forces of the peoples, labour and capital are for the greater part tamed away from their natural application, and consumed unproductively.

"Hundreds of millions are spent in acquiring terrible engines of destruction which, accepted to-day as the supreme effort of science, are doomed to lose all their value in consequence of some new discovery. National culture, economic progress, and the production of wealth are paralysed or warped in their development; moreover, in the inverse ratio of their increase, the armaments of each Power tend less and less towards the end which the governments had in view.

"The economic crises, due to a large extent to the system of unlimited armaments, and to the perpetual danger that lurks in this accumulation of war materials, transform the armed peace of our days into a crushing burden which the people find it ever more difficult to support.

"It seems, therefore, clear that, if this state of things were to continue, it would fatally lead to the very catastrophe which it was meant to ward off, and the horrors of which strike the human mind with dismay."

The Tsar's appeal to the world has no parallel in history. It stands alone as a noble and Titanic effort to help the human race. The first circular issued by his Majesty defined the danger which threatened the civilised world with a degree of courage and precision which must be characterised as genius. The imperial message of peace was hailed with joy and gratitude by the thinking classes and the toiling masses. The dawn of a new era seemed breaking over the world. There was never before such a splendid opportunity of doing for peoples what has been accomplished for individuals, and binding them together as members of an organised and peace-abiding community. But vested interests were threatened and brilliant careers were in danger of being spoiled were the plan carried out. So a strong undercurrent of opposition set in against it. Before the Conference could meet at the Hague the main question was cleverly eliminated from the programme. The military delegates kept beating about the bush, instead of furthering the aims which the Congress was convoked to realise. They took up their position on the old-world platform, heedless of the course which events were taking. And before their futile discussions had wholly ceased the Transvaal War was declared, and a series of object-lessons were given which swept the last remnants of *terra firma* from under the feet of these dangerous enthusiasts.

THE SOUTH AFRICAN CAMPAIGN CONFIRMS THE THESIS THAT WAR BETWEEN GREAT POWERS IS IMPOSSIBLE.

It has been affirmed by some military men of the old school that the struggle in South Africa has brought nothing new to light, and I am not concerned to question this assertion. Much, probably most, of what it has proved was believed or suspected before, just as Copernicus' theory was held and taught in Plato's day by Philolaus, but not grasped as a truth, not assimilated as a fact. No lesson is so well laid to heart as that for which a high price has been paid, and the cost of the teaching of the Transvaal Campaign has been exorbitant already, although the full bill has not yet been presented. That instructive war is the first in which perfected firearms and smokeless powder have been employed on a large scale; in which improvised entrenchments and barbed wire entanglements have rendered such constant and material service to the defence, and in which the efficiency of resourceful farmers has been so thoroughly tested by well-trained and gallant troops, that henceforth the dogma of the necessity of obligatory military service may be safely relegated to the limbo of disembodied dreams. This last lesson is at once the most precious and most dangerous of all. It means neither more nor less than the death of militarism and the wiping out of all the advantages which militarism was relied upon to secure for the nations that cultivated it. Hence the danger that the truth will be suppressed or disfigured, and hence the duty of enlightened citizens to obtain an impartial hearing for the facts. And I should be happy were I warranted in saying that my earnest appeal to the peoples of the world is superfluous in Great Britain. But I regret that this is not so.

The argumentative tactics of the advocates of the old order of things consist in admitting that there are more things in the South African campaign than in their superficial philosophy they ever dreamt of, and in adding that they are confined to South Africa and have no application to any possible theatre of a European war. They are particularly

eloquent on the subject of a climate, to which they ascribe many of the unforeseen phenomena of the campaign. But even a schoolboy's acquaintance with the subject is sufficient to show that South African climate is among the most salubrious of the world. It is unquestionably much more healthy than that of most of the European countries which are likely to become theatres of future wars.

The same zealous critics explain the long duration of the war by the topographical peculiarities of the country, and the difficulties which they present to an invader. This argument is wholly devoid of value. If Northern Natal, the theatre of part of the operations be excepted, the greater portion of South Africa is, compared with much of Europe, absolutely flat. Besides, it must be remembered that some of the worst British defeats were inflicted in flat country, such as Magersfontein. The Orange Free State, where the British lost innumerable guerilla actions, is entirely flat. The best positions nowadays are open lines of heights and undulations of the ground, not standing completely alone, but standing one behind the other, so that infantry and artillery can mutually support each other from front and rear of the position, without one of these arms coming under the fire directed against the other.

Another method of explaining away the "peculiarities" of the Transvaal War is to allege the enormous stretch of country over which operations had to be carried on, and the disproportionate sparseness of the population. This statement is absolutely true in itself, but its employment as an argument against the relevancy of the Boer campaign to European warfare is an egregious instance of special pleading. It simply ruins the case of those who put it forward. Instead of being a drawback to the British forces it was an enormous advantage, which European Powers will never enjoy when contending with each other. On our continent the massing of a vast number of soldiers in a restricted space, and their forced sojourn for a considerable time in the same spot,* will constitute a real and a serious disadvantage, engendering disease among the men, rendering the provisioning of the troops and horses most difficult, and giving rise to problems of a much more arduous kind than any that sprang from the greater extent of the war theatre in South Africa.

* General von der Galtz states that to anyone following on a map the movement the troops in a European war, they will appear to be immovable.

A farther explanation of the British reverses given by those who refuse to recognise that the conditions of the war have changed, is the distance of England from the scene of operations. But this really explains nothing. As mistress of the sea, England has had no difficulty in sending troops to South Africa. It was for her Government merely a matter of money, and the prolongation of transport by some weeks.

There is perhaps nothing astonishing in the fact that Continental critics, in order to draw their own lessons from the Transvaal War, should insist strongly upon the defects of the British troops in South Africa; but that a considerable number of English writers and politicians should be of the same opinion is an eloquent tribute to the power of routine.

The leading of the British troops was carried out according to English regulations, which are identical in principle with the German rules. But what, in reality, are these regulations worth? The Russian General Skugarewsky, the German Generals Pelet-Narbonne, von Janson, Müller and Rohne, and the French Luzeux and Mignot are agreed that, in face of the changed conditions of contemporary warfare, they are utterly absurd in theory and, happily, not feasible in practice, when the enemy is on the field with rifles and cartridges. In the field of manœuvres they are not devoid of an element of the picturesque.

The truth is that the revolution in warfare which technical science has achieved can no more be reasoned away than could that once effected in astronomy by the Copernican system. It can, at most, be obscured for a time until war sweeps away the chaff of effete theories. Unbiased officers, with their wits about them, see the truth and proclaim it. Lieut. Col. Henderson, late Director of the Intelligence Department on Lord Roberts' Staff in South Africa, when summing up the technical lessons of the Transvaal War in a preface which he has contributed to the English translation of Count Sternberg's "Experiences of the Boer War," soundly rates the exponents of foreign military thought for their ignorance and pedantry, and their refusal to recognise that the small-bore rifle and smokeless powder have completely revolutionised modern war. The military writers of the Continent, he declares, are so saturated with the campaign of 1870-71 that they understand war under one aspect only, and persist in theories which have no longer any foundation in fact. He notes, with something more than surprise, their stubborn refusal to admit that the flat trajectory of the small-bore rifle, together with the invisibility of the man who uses it, have wrought a complete revolution in the art of fighting battles.

With a unanimity which seems convincing, but which in reality is nothing but a convention, the military routinists reproach the British officers with having neglected to reconnoitre the Boer positions before attacking them. Now, if this difficulty of reconnoitring had never been predicted as one of the features of the war of the future, the reproach might be upheld. But it was foretold long ago as a characteristic of contemporary warfare.

To attribute this admittedly inevitable failure of the reconnaissances to British incompetency is therefore a distorting of truth and a wanton calumny. A lack of enduring power has been alleged against the English soldier with at least a colourable pretext: their retreat and surrender after insignificant losses. But the pretext is not a reason. The fact is, as I pointed out in my book, the new conditions of warfare are such that, although the losses sustained are small when compared to the general number of the troops, these losses are, nevertheless, of such a character that no civilised troops could sustain them without losing *morale*. This fact has been well known for many years past. General Kuropatkin, now Russian Minister of War, who took part in the war of 1877, expressed the opinion that "Troops do not give way so much owing to an inferiority of number, which forbids them holding on (they might resist even after losing 75 per cent. of their effective), nor in consequence of the losses which they have sustained, but in fear of losses which they expect if they remain where they are, or continue the attack."

And that was precisely what took place in the South African campaign. To go on with the attack appeared, and would have been, to court certain death. The writers who thus flippantly asperse the reputation of gallant men would do well to study at least the rudiments of the psychology of war before tackling delicate problems which presuppose a considerable knowledge of it. Nobody, not even these clippers and shearers of brave soldiers' good name, has ever ventured to cast a doubt on the intrepidity of the Russian soldier. No ancient Stoic died with less concern, with greater indifference. Yet even they are men with bodies and nerves, and are subject to the same psychological laws as their fellows. M. Botkine, the University Professor and Physician of the Emperor Alexander II., saw sights which made him regard heroism in the light in which Brutus, dying, contemplated virtue, although during the Russo-Turkish War rifles and heavy guns were much less murderous than they are to-day. Professor Botkine wrote: "Heroes have had their day; they have lost their prestige since each man knows that heroism has no longer any value against entrenched Turks." It is much to be regretted that the men who make history are not the men who write it.

It has further been alleged that the Boers were exceptionally good shots and splendid soldiers generally. That is a hollow phrase. They were, not good but bad marksmen, from a military point of view, when shooting from a distance greater than those familiar to huntsmen. Such is the mature judgment of the military representative of the United States, whose verdict is founded upon observation and expressed with impartiality. At any rate they cannot be rightly termed exceptionally good soldiers. They had no discipline whatever, no cohesion. The armies were directed by the Council of War, which was often powerless to enforce obedience when the soldiers really, though not formally, refused to accord it. This topsy-turveydom rendered it impossible for the Boers to utilize their successes over the British to an extent which astounded the observing world. Now and then a company of soldiers would pack up their household goods, leave the field of battle and pilgrimage to their homes.

If the lame explanations given by military conservatives to account for the unwonted phenomena of the Boer War were correct, the whole campaign, as it was gradually unrolled before our eyes, ought to have assumed a quite different physiognomy. Take the question of climate, for instance. Its action is alleged to have been favourable to the Boers and disastrous to the British. Let us grant the postulate and see how it works out. Given that strong point in their favour, and further a superiority in the matter of number, the Boers should have scored a brilliant success every time that the invaders were in the minority. Do we find this to have been the case? Nothing of the kind. When on the outbreak of hostilities the Boers were more numerous than their enemies, their attacks failed signally. What was the climate doing then? Apparently it was as inactive as Baal when his followers shouted to him to send down fire from heaven. If the British failures to score a victory even when numbers were on their side be attributable to exceptional and local causes, to what are the Boers' failures under like conditions to be assigned? There is surely not one kind of logic for soldiers and another for civilians, rigorously though the sections of society be kept apart on the Continent.

The alleged defects of British artillery have also been relied upon to explain the results of many of the unsuccessful battles fought by the British. But between this and the other explanations there is an unmistakable family likeness.

The truth is that the British artillery were not a whit worse than they professed to be, and that in most of the actions in which they suffered defeat they were superior to the artillery of the Boers in numbers and in power; so much superior indeed that no similar advantage can ever be hoped for by any belligerent in a European War.

It is further urged by the upholders of the "local and exceptional" theory that the British commanders did not employ until too late the tactics adopted by Lord Roberts of turning the enemy's position. But the reproach implied in this allegation is eminently unfair. When Lord Roberts had recourse to the tactics in question, his superiority to the Boers was as four to one, and in some cases as seven to one. Had it been less, as it was in the case of the commanders who went before him, no turning movement would have had a chance of success.

General von der Goltz, who, in writing his latest work ("Krieg und Heerführung"), which appeared only a few weeks ago, had the consequences of the Transvaal War under his eyes, says that of a hundred attacks intended for turning movements, experience goes to show that eighty end by coming upon the enemy's front." We see this already at the great peace manœuvres.

Nor should it be forgotten that the position of the enemy at the manœuvres is known in advance. It is a very different task to carry out a turning position when fortresses and entrenched camps bar the way and the spaces between them are occupied by improvised fortifications, and when the enemy's position and the whereabouts of his reserve are unknown and unsuspected. In a word, the explanations offered by partisans of the old system in order to suppress or distort the lessons of the Transvaal War presuppose a campaign which has no existence outside the imagination of the writers, and a system of logic which human reason, even though dimmed by routine, cannot endorse.

It is incontestable that the *rôle* of cavalry as a formidable weapon in warfare is played out. Colonel Henderson's remarks, in his preface to the work already mentioned, amply confirm this view, which I had long before put forward,* and are supported by the authority of a small group of experienced military men on the Continent. The late Director of the Intelligence Department of Lord Roberts' Staff says: "Cavalry--armed, trained, and equipped as the cavalry of the Continent--is as obsolete as the Crusaders. The small-bore and smokeless powder have destroyed the last vestiges of the traditional *rôle* of cavalry." That is the somewhat tame story told by the South African campaign. But how thrilling would the tale not have been, had the experiment been tried in a European war of the Titans? Three years ago it was a sacred dogma of the military caste--there were but a few enlightened heretics--that cavalry was the *grand pièce de résistance* in war. This tenet has now been exploded. The men who held it most tenaciously are ready to suggest means for reinstating it in its lost position. They were

mistaken before; what warranty is there that they are not mistaken now? Yet cavalry is certain to go on figuring at manœuvres, and more especially in the military budget, year after year. And the fact has meanwhile been established that its place is in past history.

* In my work on the War of the Future.

But it is in the use of artillery that the Transvaal War furnishes the most important lessons. Before that war it was axiomatically admitted that without the concurrence of artillery, good infantry, even very inferior in number, could not be dislodged from a strong entrenched position. But South African experience has swept away the delusion. It tells us first that it would be absurd not to assume that infantry on the defensive will always *entrench*, from which we must conclude that the conduct of the battle depends largely upon the artillery. But the action of the artillery in South Africa has been, in general, absolutely contemptible against an entrenched enemy. It never caused heavy losses, obliged the enemy to disclose his position, or shook his *morale*. Yet in these battles the attackers had from four to twenty times as much artillery as the defenders, a superiority which no European army would possess.

All through the South African War, the only example of heavy loss from artillery was at Spion Kop. There, indeed, the British suffered terribly from the fire of the Boer shrapnel. But that battle is itself the best confirmation of the lesson I have drawn as to the worthlessness of artillery against entrenchments. For at Spion Kop the British did not entrench, and were crowded together on a small hill-top without any protection. Therefore they lost enormously. But in every other battle artillery was almost without effect, being used against good entrenchments.

The old theory that a great superiority in artillery is sufficient to silence the fire of entrenched men, and prepare the way for infantry attack, seems to be an illusion. There is no exaggeration in saying that British batteries were often engaged against separate Boer guns without succeeding, after a cannonade lasting hours, in silencing one of them permanently, or even appreciably improving the conditions of the infantry attack. The tactics adopted by the Boers of shifting the position of their guns, and the slight effect of explosive shells, seem to explain the powerlessness of artillery in engagements.

An example will make this clear: For the use of shrapnel, the British had excellent conditions at Paardeberg. They had 100 guns in commanding positions, and were unopposed by the enemy's artillery; the ranges were exactly known, and the fire directed from a balloon. Yet the entrenched Boers lost no more than 179. The accuracy of the fire is certain, for shrapnel cases were found scattered freely within from five to ten paces of the Boer works. Shell fire was equally ineffective, as shown by the losses, and the ease with which the Boers held to their entrenchments.

Thus all the old theories have been refuted by experience; even the long years needed for the training of good artillerymen were suddenly reduced in the case of the Boers to a few weeks. But the facts have no meaning for the theorists, who ask us to ignore their teaching and to refuse to listen to the warnings of Generals like Müller, Rohne, von der

Goltz, Skougarevsky, Pellet-Narbonne and Hauschild, who possess the knowledge which only science and experience can bestow, and the plain speaking which springs from moral courage. When the Boers cease to be belligerents and a European Power takes their place, the old doctrines will be brought back to life again and permeated with truth anew. Hence there must be no stoppage of funds; the milliards must continue to flow in, the taxes will have to be increased.

I wish it to be distinctly understood that I am by no means opposed to the work of national defence in any country. So long as nations are not formally linked together in an organised community, as individuals have been for ages, each one must guard itself against injustice and aggression. But even here the means should be proportionate to the end. To squander untold millions on preparations which cannot possibly lead to anything is not statesmanlike, but criminal. And that is what European peoples have hitherto been doing. Their fatal mistake has now been revealed, and all the anticipations of the antiquated school of military tactics have been belied by facts. Yet the representatives of that school come forward again with new predictions, which the masses are requested to receive with childlike faith and to back with ruinous sacrifices. In their "Manual of Rules" they lay it down as a principle that an attack, carried out with spirit and dash, according to their instructions, is bound to succeed, and in the chapter which treats of defence they declare that if the rules they have framed be faithfully followed, no attack can prevail against the resistance. And these puerilities are offered to the public as the supreme effort of military science in the twentieth century! The Transvaal War has swept away those intellectual cobwebs and shown that success is on the side of the defence, even when the attack has numbers in its favour in the proportion of four to one, as I predicted it would be, long before the South African Campaign had entered into the domain of practical politics.

The close formations recommended by official army rules of recent date on the Continent differ very little from those that came into vogue immediately after the invention of firearms, and when their destructive power was about one hundred times less than it is to-day.

Lord Roberts recognised this when, speaking of Yeomanry training, he said that he must advise the men to spread themselves out more, as it was found in South Africa that this was necessary. When he first went there he laid down the rule that the files were not to be closer than six paces when advancing to the attack. That was very soon altered to 10 and 20 paces. It was absolutely necessary to be widely separated.

Tactical training has also been ruthlessly shorn of nine-tenths of its pristine glory, and inborn qualities, which no efforts of the drill-sergeant can implant, have suddenly taken its place. The part played by the trained soldier in South Africa has thrown a strong sidelight on this point. The Boers who defeated the first British attacks had no training; and the British only defeated the Boers when they had sent out enormous reinforcements, the greater part of which had had no manœuvre training at all. The whole of the South African War proves not only that in consequence of the employment of rapid-firing rifles and smokeless powder, and of the universal employment of

entrenchments, the methods of offensive warfare employed to-day have become inefficacious, but also that the professional soldier no longer possesses his ancient superiority over the armed civilian who has undergone the shortest course of training. The excellent defence of the Boers is enough to prove that it is not trained soldiers manœuvring with mechanical precision under the direction of commanders bestarred and belaced who are the best. It may be objected to this that the local conditions were so favourable to the Boers that their successes prove nothing in regard to a Continental war. We have tried to prove the contrary, but let us take the point of view of our opponents. We have a still better occasion to compare the merits of the regular soldier with those of the untrained man, gifted with an intelligence which has not been stunted by instruction based upon regulations and absurd manuals, for the British forces in South Africa contained a great number of soldiers belonging to both categories. On the one hand, we find the Regular Army rigorously trained, and with a certain experience of war; on the other, we see a heterogeneous collection of Colonials and English Yeomanry, of whom nineteen-twentieths had never before fired a shot at manœuvres. What is the result of comparing these different types? We find that the almost unanimous opinion of competent authorities, of generals, correspondents and soldiers themselves, is that the civilians were infinitely more useful than the Regulars. But the best proof of this is the fact that the British Government, instead of raising new battalions of Regular troops in order to reinforce the South African Army, prefers to send out Colonials and untrained Englishmen whose only qualification is a certain skill with the rifle and some knowledge of horsemanship -the latter, of course, for specific local reasons. We even find some of the Colonials so convinced of the inferiority of the training of the Regular Army that they have refused to serve under British officers; and public opinion in England has supported their attitude.

In action these civilians seem to have been superior to Regulars: their shooting was as good, I shall not say better, since at great distances and against an invisible enemy it is the number of rounds fired in a certain time, and not the aim, which tells. They took cover more skilfully, and they displayed a greater individual intelligence; they were more independent than their officers, never falling into the panics which dispersed the Regulars at Stormberg, Magersfontein, and elsewhere. Kimberley and Mafeking were defended chiefly by civilians against forces proportionally much greater than those which attacked Ladysmith, which was defended by Regular troops. Nor did the civilians surrender so easily, or in such great numbers, as the Regulars. Their improvised defence of Wepener was one of the most remarkable exploits of the war; under precisely the same circumstances the Regulars surrendered time after time. At Paardeberg, when the Regular troops had been driven back with enormous losses from Cronje's trenches, it was the Canadians who delivered the final attack which preceded the surrender. In short, the whole history of the war proves that civilians possess all the best qualities of Regular troops, their discipline and courage, and much more intelligence, initiative, and endurance.

It is easy to explain this superiority of the civilians over long-service Regulars by the conditions of the modern battle-field. In consequence of the dispersion of the men it is quite impossible to maintain the mechanical dispositions which are taught on parades

and manœuvres. Under such circumstances officers cannot direct their men effectively, and as the men are not trained to use their individual judgments they tend to turn into a flock of sheep. The capacity for individual action becomes enfeebled in proportion to the training which the soldier receives. Thus if his officers are too far away to give orders, the Regular is at a loss what to do. But the intelligent civilian, whose capacity for action has been developed by his habits of sportsman, farmer, and artisan, and who is accustomed to use his own faculties independently, fights very well without orders. He is primarily better in a trial, and as on the battle-field the order of the parade ground is dislocated, the question of superiority is decided by the faculty of initiative alone. It is this quality, we must recognise, which makes the superiority of the Boers over the British. And it is this also which accounts for the superiority of the British civilian over the British Regular.

Colonel Henderson, late Chief of the Intelligence Department of Lord Roberts' Staff in South Africa, says: "The South African War, like the War in the Peninsula and the Civil War in America, has been a triumph for the principle of voluntary service. In the wars of the future *morale* will count for much more than mere numbers, and this has always been the weakest point of conscript armies. The terribly demoralising effect of modern fire and the embarrassments created by smokeless powder are so important features of the campaign, that it is with something more than surprise that we note a stubborn refusal to admit that the flat trajectory of the small-bore rifle, together with the invisibility of the man who uses it, have wrought a complete revolution in the art of fighting battles. But the continental soldiers would have found no need to change their ordinary formations. The truth is, however, that our ordinary formations, previous to the war, were almost identically the same as those of other armies; but that our officers, thanks to the experience of the Tirah campaign, and to a very general instinct in favor of less rigid methods, recognised, before even a shot was fired, that what they had practised in peace was utterly unsuited to the Mauser-swept battlefield. On hardly a single occasion was the usage of the manœuvres-ground adhered to."

These things were clearly foreseen and repeatedly foretold by civilians. They were emphatically denied by the specialists who should have been the first to perceive them. And yet those nodding helmsmen claim to be again listened to with confidence and demand that civilians be ruled out of court as intruders. The claim is as preposterous as the message which they have to deliver is misleading. It is for the people, who must finally pay the piper, to try the issue, deliver the verdict, and see that it is duly carried out.

JEAN DE BLOCH.

THE TRANSVAAL WAR: ITS LESSONS IN REGARD TO MILITARISM AND ARMY RE-ORGANISATION.

By His Excellency M. JEAN DE BLOCH,

Russian Councillor of State, author of "The War of the Future."

Monday, 24th June, 1901.

Major-General Sir J.F. Maurice, K.C.B., R.A., p.sc.
(Commanding the Woolwich District), in the Chair.

[The lecture is now printed as it was finally read. Owing to the length of the paper, and to save time in reading, it was found necessary, where possible, to transform portions of the text into the form of Notes, which is the reason of their voluminous character.]

PART I.

At the present moment your country, under the influence of a public opinion created by the South African War, is on the eve of the radical reform and reconstruction of her Army. The study of the lessons which the Transvaal War teaches in regard to a great European War is of immense importance. Firstly, because it is the first time that the perfected fire-arms and smokeless powder have been brought into use on a great scale; and, secondly, because those teachings prove best how far the calling together of the Hague Conference was opportune and in the interests of humanity, in view of the fact that a great war would bring forth terrible catastrophes without solving the questions in dispute, owing to the exhaustion of economic resources; and probably internal revolution would force the conclusion of peace, with the social order of Europe in dissolution, and Europe would find herself faced by complications which it is now impossible to describe.¹

The South African War will serve as a notice to the Governments and people to change their aggressive policies, and it can give certain immediate advantages. It proves that military service as practised to-day is absurd, and that the sacrifices made on the Continent to support conscription, and into which it is proposed to drag England, are unnecessary. It shows that the theatrical spectacles called manœuvres are in no way related to real warfare.²

¹General von der Goltz, the re-organiser of the Turkish Army, and now chief of the Engineers and Pioneers of German Army, in his remarkable classic "The Nation in Arms" (5th edition), expresses the same opinion: -"Economic resources will break down before the armies are exhausted; for instance, operations in France must be very long drawn out. A war against Russia will demand several campaigns before arriving at any result.... We may predict that wars cannot terminate other than by the complete destruction (Vernichtung) of one or the exhaustion of both combatants."

When a German General affirms such a thing as this, he must be very deeply convinced of the gravity of the situation.

²But, unfortunately, no illusions can be cherished as to the learning of this lesson. The lessons of the Transvaal War are in danger of being lost to humanity. Even England makes no exception to this rule. We find distinguished writers, after summing up the events of the Transvaal War, expressing as their conclusion that, generally speaking, on all the subjects in question, the war confirms and demonstrates to the public what was already known. And this could not be otherwise. For the present situation arises from a veritable nervous disease a perversion resembling the moral epidemics common in the Middle Ages. In place of seeing a danger for the social order, and even for their own existence in the present conditions, the sovereigns and statesmen of Europe attempt to exploit the antagonism of nations among themselves in order to continue their fatal policy. Only a few genuine statesmen and a few true patriots revolt and denounce the fatal consequences of this policy. The force of this re-actionary movement we see best in the way in which the Conventions of the Hague Peace Conference were received. On the eve of the Transvaal War, which, as Lord Curzon declared so justly, has revolutionised the ideas of the whole world on questions relating to armaments, tactics, and the whole science and art of war, scarcely any effort was made to support by proof and scientific argument the important Hague manifestations. Even on the part of the military delegates at the Hague Conference, whose interest and duty it was to support the manifestation of their supreme chief, not a word was uttered concerning those facts which the Transvaal War a few months later proved. And the reason lies not in the bad will of the soldiers, but in the traditions of their Service. From time immemorial the vast majority of soldiers have been attached to routine, troubling nothing in regard to essentials, and, indeed, being without the means for establishing a comparison between the present and past, The technical changes in the mechanism of war are accessible to each in his special sphere. But each expert is confined to his own sphere; and since every effort is made to keep secret the results obtained, only exceptional minds can embrace the whole subject, and appreciate the results of the new conditions. In addition, it must be said that the great majority of soldiers are strangers to the economic

questions involved in war, while diplomatists and the chiefs of political parties have not the time to occupy themselves with such questions. The same may be said of statesmen in office, to whom belongs in the last resort the decision of the question of peace and war. Absorbed in their immediate duties, very few attain a height of view sufficient to see all those dangers of the future which the Transvaal War has shown so clearly. Indeed, there is only one country in which full consideration of the questions involved in a great future war is possible, and that country is England, her advantage arising from the comparative independence of the Government of her soldiers, and soldiers from their superiors. English soldiers have shown that they are first of all citizens of their country, and that the interests of the people are dearer to them than their uniforms.

It is this reason which forces me, notwithstanding the exceptionally unfavourable conditions in which I am situated, owing to difficulties arising from ignorance of the English language and the condition of my health, to prepare and hand over for your consideration the question of the teachings of the South African War in regard to a great European war, and also in regard to the projected increase of the British Army with the object of participating in a struggle with the Continental Powers. Having devoted twelve years of my life to the study of the questions involved by a future war, it would be unpardonable for me to refrain from taking advantage of the opportunity which your Council has given me to express my views. But it would be absurd self-confidence on my part if I entered into the details of the Transvaal War. Each of you as experts, with opportunities for following more closely than I the events of the war from printed sources, and, what is much more important, by relations with eye-witnesses and participators in the actual events, is much more competent than I to express an opinion as to details.

But, on the other hand, I, standing somewhat farther away, have been able to follow the events of the South African War, not from the point of view of its importance only for England as a State with great Colonies, but in its influence on a future war which might break out between the Great Powers. However, even in this relation I do not pretend to express definite opinions and affirmations; but, being an economist, and, at the same time, not unfamiliar with military questions, as the author of a book on "The War of the Future," which has passed through the criticism of military authorities, I may put forward some facts to show how far the present war justified my predictions.

Lack of time makes it impossible for me to enter into details. Nevertheless the question is one of extreme gravity. For that reason I have set out material on the walls of this room, which enables you to see the question as I see it.¹

¹These tableaux illustrate: -

THE MECHANISM OF WAR.

To show that the war of the future will resemble hardly at all even the most recent struggles, I have attempted to represent the principal factors of war; the composition of troops, their armament, the possibility of erecting shelter very rapidly; the impossibility with smokeless powder of reconnoitring the enemy's position; finally, the difficulty of attack which will force the combatants if they are to avoid the enormous losses which would result from a hand-to-hand fight, to adopt tactics which will make the struggle very prolonged. I have collected statistics which show, on the one hand, that the military forces of the Great Powers are nowadays practically equal in number, armament, and training, that the obtaining of such results as would force one party to make a disadvantageous peace is therefore impossible; and that, on the other hand, the regular provisioning of the Army with food and munitions of war will form an extremely difficult problem.

NAVAL WARFARE AND COLONIAL INTERESTS.

Naval warfare is represented by a series of tableaux destined to furnish those indispensable elements which will enable us to judge whether naval warfare has not this in common with warfare on land, that it surpasses all practical needs, and whether at the first use in battle it can do more than throw into the sea the millions abstracted from the labour of the people and thousands of human lives. Whether also in order to stop all commercial intercourse the regular cruiser and armed vessels are not enough.

ECONOMIC AND FINANCIAL CONSEQUENCES.

Another series of tableaux shows why the economic resources will come to an end before the armed forces are exhausted. The call to the colours of almost all the civil population capable of bearing arms will produce such internal perturbations that the lack of financial and economic resources will end in terrible misery, the bankruptcy of the belligerents, and even in revolution.

The examination of budgets, an estimate of the cost of a future war--taking into account the differences which exist between this war and the Franco-German and Russo-Turkish Wars of 1877--prove it also.

War not then terminating except by the complete exhaustion of both combatants or by a social cataclysm, it is necessary to show that peace will be hardly easier to conclude for the victors than the vanquished; that the results obtained by the victors will not compensate them for their sacrifices, and that the disarmament of their troops will present serious difficulties, above all among the beaten side, the conclusion of peace being liable to be followed by internal revolution.

It may be that my conclusions are wrong; but my work is without *arrière-pensée*, and it is the result of profound study. My thesis at least, therefore, merits examination. That is all I ask for. But even if you doubt the accuracy of my views, or find them exaggerated as regards the conditions of to-day, you must assume that the ascensional movement in numbers, technique, and economic factors will continue; and then put yourselves the question, What will happen in a war ten or fifteen years hence, and what will be the consequences? It is necessary to consider this question now, for politics are not made from day to day.

The difficulties of the task being set out, I must beg for your indulgence for the length of my paper. But having to embrace so many different considerations, technical and economic, present and future, by the nature of things it cannot be short. I will, however, attempt to make it easier to understand and discuss by dividing it into several distinct parts; and if I make one request it is that you should be so good in the interest of a possible discussion as to refer all objections to the corresponding sections, adopting the nomenclature used by me. I will first deal with the thesis that -

THE RESULTS OF THE TRANSVAAL WAR ARE NOT DUE TO DEFECTS IN THE BRITISH ARMY.

To this capital objection rises at once. Military routinists declare that if, in place of the British, another nation under compulsory service had had to fight the Boers, the results would have been different, and the war would have been over long ago.

Finally, facts are collected to show that the armed peace as it exists now is nothing more than war disguised, and that the situation become chronic in Europe weighs on it in two ways: it swallows up a great quantity of floating capital, that is to say, the collective natural savings, by transforming them into armaments; on the other hand, it retards the development of commerce and industry, prevents the diminution of taxation, and thus develops socialism and anarchism to such an extent that it must end by destroying social order.

For different reasons the sympathies of almost the entire masses of the whole world have been on the side of the Boers, and, therefore, there is nothing astonishing in the fact that this view has been generally accepted. As Taine said, the people think not with the head, but with the heart. Yet this popular belief is one of immense importance, for if it be not uprooted it may render null every lesson which the Transvaal war teaches. For this reason I am forced to study this question from two points of view: at first, whether it can really be believed that an European Army, such as that of Germany, which has the best reputation, would have obtained more decisive results than the British Army; and, secondly, whether in case of an invasion, say of Germany by France, the invader would not meet with still greater difficulties than the British Army had to meet in South Africa.

THE REPROACH OF INCAPACITY AND THE NEGLECT OF THE BRITISH ARMIES TO MAKE SUFFICIENT RECONNAISSANCES.

The most remarkable feature of the war, the feature which has been the greatest cause of British reverse, and which would recur with consequences infinitely more grave in a war between better organised military Powers than the Boers, is the constant impossibility of determining the enemy's positions.

With a unanimity which seems convincing, but which in reality is nothing but a convention, the military routinists reproach the British officers with having neglected to reconnoitre the Boer positions before attacking them. Now, if this difficulty of reconnoitring had never been predicted as one of the features of the war of the future, the reproach might be upheld. But long before the outbreak of the South African war the difficulty of reconnaissance had been announced by military specialists of the first class as one of the inevitable consequences of the employment of smokeless powder and long-range weapons. This being so, it is not to British defects that we must attribute the failure of the reconnaissances, but to the new conditions of war.¹

¹In my work "The War of the Future," and in my lectures delivered at the Hague, both before the outbreak of the South African War, I pointed out that the chief change arising from the employment of smokeless powder would be the possibility of marksmen in good cover preventing all reconnaissance, I declared that under the new conditions the attacker would see nothing, and would barely hear the rifle shots which would stretch his scouts on the ground. These shots would alone tell him that the enemy was in the neighbourhood. But where exactly? At what point? At what distance?

The routinists tell us that they would send out their squadrons to reconnoitre. Yet Lord Methuen himself declared from personal observation that "it is impossible to sit on horseback at less than 2,000 yards from the enemy." Then the routinists declare that when infantry advance the enemy must disclose his position. But that this would not necessarily be so was seen long before the South African War. General von der Goltz quotes as a characteristic fact that during manœuvres held in Germany in the presence of the Emperor, surrounded by judges, soldiers ambuscaded 400 metres away on the margin of a forest were able to fire for a long time before their adversaries could determine whence came the fire. Therefore this was accepted as a feature of modern war in the German Army. We cannot put it down to the fault of the German commanders in not making proper reconnaissances. For authorities like von der Goltz cite it as a characteristic of the new weapons. Thus, years before the lesson of the Transvaal War was taught, we see it recognised by the best military writers of all nations that smokeless powder had made reconnaissance immensely more difficult than before. In real warfare the difficulty is, of course, infinitely greater. During manœuvres every inhabitant is a source of information. In actual war, on the contrary, the civil inhabitants fly or keep silent. In South Africa the British had numerous auxiliaries in the shape of the

English inhabitants of the invaded countries and also the local Kaffirs, but nevertheless they suffered heavy defeats in consequence of the impossibility of obtaining information. What would be the result in the case of an invasion of France by Germany we may predict. As long ago as the war of 1877 Osman Pasha employed rows of marksmen sheltered in holes to prevent the approach of Russian scouts. There is no doubt that this system will be employed in future wars, and that all the roads and approaches to a position will be guarded by marksmen hidden behind trees, inequalities of the land, and shelter-trenches, and much more systematically organised than were the Boers in South Africa. Nevertheless, the British suffered constant reverse from the invisibility of the Boers. At the battle of Stormberg the British advanced to within a few hundred yards of the Boers without seeing them, with the result that they were totally defeated, leaving a third of their force in the hands of the enemy. The correspondents declare that even after the Boers had opened fire the British found it quite impossible to locate their position. At Magersfontein the Highland Brigade approached to within 300 yards of the Boers without suspecting that they were within range and lost a quarter of their effective from a few volleys. The description of the Boer position is worth quoting from the Daily Mail:—"The Boers occupied a large kopje, at the foot of which they had sunk trenches to the level of the veldt, and from there they attacked us vigorously. The trenches extended beyond the kopje on the level; they were hidden with brushwood, and those near the kopje were defended with a double wire network. While the Highlanders fought on the right, the Guards marched across the open plain towards the other trenches, and fought for 15 hours against an invisible foe." At the battle of Colenso the same thing occurred. The commander of the British artillery advanced his guns to within 300 yards of the river without seeing that it was filled with Boers, who immediately opened a fire so terrible that two batteries were lost. If such are really the conditions of modern war, what chance would German troops have of succeeding in their reconnaissances any better? None whatever, and facts prove it clearly. Those who are blind to the facts will declare, nevertheless, that Germans would succeed. If the British failed in the Transvaal, it is only proof, they say, that they were badly taught and negligent. That may be. Possibly at the beginning of the war the British did not understand the art of reconnaissance; but after three or four months? The war has now lasted twenty months, and the reconnaissances fail as much as ever. We must then either admit that the conditions of warfare are changed, or that the British officers are deprived of all intelligence. Yet these British officers, who we are told are impenetrable to experience and refractory to all teaching, belong to the aristocracy and upper middle class—in short, to the most enlightened classes in the country, classes which everywhere, and particularly in England, have produced so many men eminent by energy and intelligence in every department of human activity, scholars, merchants, administrators; and these officers have behind them the practice of thirty years of warfare in every climate. What basis have we then for assuming that the Germans would do better?

The fact is, that it has been established for a long time that it is impossible to effect reconnaissances when the defender has skilfully organised the defence of the approaches. At Plevna the Russians, having taken the advanced Turkish trenches, suddenly discovered two other rows of trenches, until then invisible. All this is recognised in the German Army itself, where dogs are being trained to perform a work

which is impossible for human beings. It is hardly necessary to show how even this means is inefficacious. First of all, in order to distinguish enemy from friend, the dog must be very near, and then it is easy for riflemen to kill them. It must be remembered also that the Boers often prevented reconnaissances, so to say, accidentally, for they lacked the regular organisation which the French would employ to form an impenetrable curtain in front of their forces. For instance, we are told, on good authority, that the Boers at Stormberg had no more idea of the proximity of the British than the British had of that of the Boers.

ARE THE LOCAL CONDITIONS OF SOUTH AFRICA SO EXCEPTIONAL AS TO DESTROY THE APPLICABILITY OF THE LESSONS TAUGHT?

Before considering the problem which I have set, it is necessary to examine how far the lessons of the Transvaal War are applicable to European conditions. The partisans of present conditions, who understand very well the importance which the new phenomena in the Transvaal War present for the future of war, attempt at any cost to explain the results obtained not by changes in the mechanism of war, but by the local conditions. These conditions, they tell us, are very different from those of Europe, both from the point of view of climate, configuration of the soil, and distances. This is very true, but the conclusion must not necessarily be drawn that the difference constitutes a difficulty in the way of an invader greater than could be met with in Europe. The climate of South Africa is in reality one of the best in the world, and it is much more temperate than a great part of Europe, which would be the theatre of a future war.

The same critics explain the long duration of the war by the topographical peculiarities of the country, and the difficulties which they present to an invader. I do not believe this argument has any value. If Northern Natal, the theatre of part of the operations be excepted, the greater part of South Africa is, compared with much of Europe, absolutely flat. Besides, it must be remembered that some of the worst British defeats were inflicted in flat country, such as Magersfontein. The Orange Free State, where the British lost innumerable guerilla actions, is entirely flat, and it is a fact that the Boer defence was often more effective in a flat country than in a hilly one.¹

The best positions nowadays are open lines of heights and undulations of the ground, not standing completely alone, but standing one behind the other, so that infantry and artillery can mutually support each other from front and rear of the position, without one of these arms coming under the fire directed against the other. General Todleben, the defender of Sevastopol, recognised the valuelessness of the argument of difficult country; for when asked what was the best defensive country in the world, replied, "An exercise ground which is perfectly flat."² The same opinions are held to-day by the German General Schlichting.

¹It is interesting to quote the opinion of von der Goltz as to the value of so-called "difficult country": -"The standard by which the value of ground is now estimated is very different from what it was in the past. Formerly, from the tactical point of view, the main question was whether the ground could be easily traversed. In choosing a position the chief thought was to have some important obstacle in front, which would delay the enemy's advance. Cover against fire was also sought for. Villages, woods, steep heights were regarded as strong points, or, as they were called, the keys of the position, by the seizure or loss of which the struggle was decided. Nowadays the chief point is to have a field of fire. Natural obstacles against the movement of troops are of importance only so far as they retain the enemy under a shower of projectiles. Soft ground, marshes, water meadows which are difficult to pass, vineyards, deeply ploughed fields which can be commanded by fire, are of greater value than any steep precipice difficult to climb. The best of all are wide-extending, bare, and low-lying slopes which can be completely overlooked, for there the enemy, though he finds no obstacle in his way, finds also no cover against the destructive effect of the weapons of the defence." - Krieg und Heerführung, 1901.

²What do we see in South Africa? In the first battles the Boers committed the mistake of entrenching themselves on hills, thus losing all the advantages of the level trajectory. Firing from a height they were obliged to estimate the distance almost to a yard. Now on a level plain the distance up to a certain point, say 600 metres, is a matter of indifference, as the ball flies almost parallel to the surface of the ground. At Dundee and Eland's Laagte the, Boers made this mistake. In their later battles this was corrected, and they entrenched on the plain, choosing a locality where ravines, brushwood, and dispersed stones made the approach more difficult, thus retarding the British under fire. It may be concluded that the hills sometimes rendered services to the Boers by preventing their inferior numbers being attacked in flank and turned. But, in general, the fact is that a great part of France, Germany, Austria, Italy, and Russia, owing to their forests, mountains, marshes, and sands, present much more favourable defensive positions than South Africa. The walls and hedgerows which border the Continental roads also offer defensive obstacles which did not exist at all in the Transvaal.

From all this I draw the conclusion that an European invader must meet with as great difficulties arising from the configuration of the country as did the British in South Africa.

DISTANCES FROM THE SEAT OF WAR.

A third explanation of the British reverses by those who refuse to recognise that the conditions of war have changed, is the distance of England from the scene of operations. But this objection really explains nothing. As mistress of the sea, England had no difficulty in sending troops to South Africa. It was for England merely a matter of money, and the prolongation of transport by some weeks. The difficulties arising from the length of the land communications really played a very small rôle.¹

The difficulties of transport have, of course, been immense, but not comparable with those which an European Army would meet with in Europe, as, the number of transport

animals required will be much greater. In procuring horses, mules, and cattle, England has had no competition in the markets, and only the difficulty of bringing her purchases by sea to the seat of war, without re-acting in any way on England herself. The conditions in an European war would be very different.²

¹Until the recent Boer invasion nearly the whole of Cape Colony was under British control; the British disposed of the railways freely, and when they had passed into the enemy's country they disposed of the railways under exactly the same conditions as the Germans would in case of an invasion of France. Moreover, although the distance from the Orange River to Pretoria was considerable, it was not greater than the length of the German communications in a march to Moscow, that of the French in marching on Berlin, or that of the Germans if they wished to occupy the centre of France. But what it is more important to remember is, that the most serious British defeats took place when their lines of communications were shortest, as from Durban to the Tugela, and from Cape Town to Modder River.

²The German expeditionary force to China had to buy horses in America and Australia, paying for them as much as £80 a head.

MISTAKES IN THE CONDUCT OF THE WAR BY BRITISH SOLDIERS.

There is nothing astonishing in the fact that Continental critics, in order to draw their own lessons from the Transvaal War, should insist so strongly upon the defects of the British troops in South Africa; but that a considerable number of English writers and politicians should be of the same opinion is eloquent testimony as to the power of routine. Nevertheless, even these critics must ask themselves the question whether the reverses so much condemned are not the consequences of new conditions of war, and whether the German Army, for example, would have done any better.

To reply to that question, we have no other means than to interrogate the Army Regulations, and study in what consists the famous German superiority. The leading of the British troops was done according to English regulations, which are identical in principle with the German rules. But what, in reality, are these regulations worth? It must be remembered that many authorities have declared the tactical regulations as employed at manœuvres to be absurdly unfitted for actual war.

The Russian General Skugarewsky, the German Generals Pelet-Narbonne, von Janson, Müller, and Rohne, and the French Luzeux and Mignot prove their absurdities.¹

¹General Luzeux, speaking of France, makes this observation: -"Who has not been struck by the diversity of opinions which we meet in hand-books on questions involved in the essential principles of tactics? There is a chaos of ideas and principles in mutual conflict, and from this conflict there comes not a ray of light. Is it astonishing that officers say, 'What is the use of studying? Let the professors begin by agreeing among themselves.'" Another French author, Colonel Mignot, says that in reality the methods recommended by the official French regulations do not differ essentially from the tactics adopted after the invention of fire-arms and the adoption of the bayonet -that is to say, at a time when these rifles produced an effect about a hundred times less powerful than to-day. In the account rendered of the progress of the military service for the last twenty-five years, edited under the direction of General Pelet-Narbonne, we find this résumé of the regulations for attack: - "The firing lines will deploy at 1,600 metres. At the range of about 1,000 metres the fire will become general, volleys still playing a part in it. The advance to the main fire position, about 300 or 400 metres from the enemy, will, as far as possible, be made at the quick step, From the main firing position the firing line, reinforced by the reserves coming up to them, will attempt the decisive assault."

The footnote below indicates a method of attack similar to that employed by the British troops at the beginning of the South African War; and you see the results. At Modder River, at Magersfontein, at Colenso, massed frontal attacks in close formation were undertaken, and failed utterly, although the British largely outnumbered the Boers.

It is difficult to see wherein lies the boasted superiority of German methods when the essential part of the German method of attack broke down so utterly. The method which succeeded ultimately in South Africa in no way resembled the boasted German methods. It was the method which Lord Roberts devised to meet the new conditions of war -that is, the abandonment of frontal attack in close order, as in his own words: - "When I went to South Africa I laid down the rules that the files are not to be closer than six paces when advancing to the attack. That was very soon altered to ten, and then to twenty." But could, then, the German regulations be carried out in actual war?

FRONTAL ATTACKS.

It needs no words from me to prove that the difficulties of frontal attacks under modern conditions, as illustrated by the South African War, has long been foreseen by the less conservative military writers. Loose formations and the use of cover were declared to be the *sine qua non*, without which a frontal attack, even with overwhelming numbers, could not succeed. The Prussian General Müller, an authority both in Germany and abroad, has told us that in order to avoid complete extermination soldiers cannot attack otherwise than in loose formation, and avoiding as far as possible the sight of the enemy; they cannot approach except in creeping, and hiding behind inequalities of the ground, digging themselves into it like moles.¹

It may be remarked that this system has been employed also in England. Sir Howard Vincent, in his lecture delivered at this Institution a year ago, said: - "Seven years ago at Aldershot I started with a provisional battalion a 'creeping' advance in column of attack.

It was not approved. It was made the subject of good-humoured caricature. The Army in the field is to-day being taught it."

Almost all military authorities were agreed even before the South African War that to approach an enemy established behind solid shelters, firing over distances measured in advance is nowadays one of the most difficult of operations, which will require days, and generals occupying high positions in France, in Russia, in England, in Italy, and in Germany declare that they will remain without results. To obtain a victory will be impossible, all affirmations made to quiet apprehensions, such as that the soldiers will fire badly, that the attackers will find cover, are either insincere or erroneous; and the result of the South African War proves that this objection has good foundation. Then we hear it objected that the Boers are exceptional soldiers. But here again we find a false trail.²

Among the methods of fire employed by the Russian infantry besides deliberate individual firing and rapid bursts of fire, an intermediate kind has now been introduced known as rapid individual firing. The advance is made quickly from a point about 1,000 metres from the enemy; over places swept by a heavy hostile fire the men run forward one by one. The troops advance to the assault without firing, and they rush forward not only with drums and trumpets sounding, but also singing their own war songs. During the advance in quick time in the firing line the rifle is carried at the slope, over the shoulder; when moving at the double it is carried at the trail. Intervals of 300 paces are kept between closed lines. In the assault the rush forward with cheering does not begin, as was formerly ordered, at 50 paces, but at 100 or 150. If the firing line makes the assault alone, the men who form it, on the command from the officer "After Me!" close upon him and rush forward.

¹In 1898 an inquiry was opened in Germany, and the *Militär-Wochenblatt*, published by the German General Staff, gave the results. According to this report, the most favourable conditions had been chosen; a plain covered with herbs and free of stones 500 metres long, and the action of creeping had as result the swelling of the arms, hands and knees, the men being breathless to such an extent that they were unable to fire with the necessary calm.

²The method in which it may be effected is laid down by Janson. The first assailant approach to the limit of the enemy's artillery fire, that is to say, about 5 kilometres, and towards the evening will push forward small bodies, for example, companies to the point where the infantry fire becomes efficacious (then 2 kilometres). These advanced troops will entrench immediately. These points d'appui form the line from which on the morrow the attack will start.

If we judge by the experiences of the South African War, not a single assailant who marched to the attack in manœuvre formation would arrive alive at the trenches which

they are expected to carry by assault. As the German troops have not carried out the war they can boast of their victories obtained at manœuvres, and deify as conquerors their generals, making believe that had they been at war with the Boers they would have gained great victories. But as they have not undergone this experience there is cause for doubt, not only for the reasons I have indicated, but also because if a war break out to-day after 20 months of experience in Africa the same mistakes and want of foresight which we have seen among the British would be reproduced by the Germans.

It is impossible to enter into details. I shall cite only one example. The first lesson of the South African War is that the essential is invisibility. Guns, lances, and belts have been painted khâki, the British troops have abandoned their showy uniforms, the officers abandon their swords and carry carbines. But what do we see in Germany? Gorgeous uniforms with showy lace are maintained, and at manœuvres one is stupefied by the prodigies and aberrations performed by the military tailor with cloth, leather, and steel.

And what was to be the result? Favourable only when the defence was timid and inactive, a presumption, which, as General Janson says, it is impossible to make, even of an enemy. The routinists pretend that modern soldiers will fire so badly that the improved rifles will produce less effect than the ancient weapons, and that, in addition, troops taking the offensive will always find cover. The Boers, however, did not do their pleasure by firing badly', and in his report on military progress during the last 25 years General Pelet-Narbonne reduces to zero the argument. "If the great extent of the field of fire is the first condition of its efficacy, we cannot see why the attacked should renounce this first condition unless in order to please the attacker. The latter has not an opportunity for choosing ground offering natural cover, and he will be forced to march across a country exactly determined, thus helping the defender's fire." But it has been replied: Yes; but the Boers are exceptional marksmen, and it is to this rather than to their magazine rifles that they owed their success. This is only a pretext, or rather falsehood. The enormously increased power of the modern rifle was proved admirably in the war in Chili. In this campaign, where some of the Congressional troops had modern and the remainder obsolete rifles, it was shown that 100 men with the new rifle put out of combat 82 men of the Dictator's army, while 100 armed with the ancient rifle, only hit 34. These were not exceptional marksmen; but the fact shows well the immensely greater danger than in the past.

Now, as the manœuvre formations adopted in the earlier portions of the Transvaal War failed so utterly, we must conclude that manœuvre tactics in no way correspond to actuality, though they may very well serve the purposes of the great of the earth who wish to play at soldiers with living pieces, and enjoy the spectacle of war without its dangers and fatigues. From the practical point of view they signify nothing, but are even injurious.

That the German Army manages its undertakings in no better way, may be seen from the fact that when some 15,000 men had to be sent to China the arrangements were absurdly impractical and absolutely defective.¹

It will be objected that the German Army proved its worth in 1870. But that war was made under conditions absolutely exceptional, which will not be repeated.²

When we hear so much of the superior tactical training of the Germans as shown at manœuvres, it is interesting to point out how insignificant was the part played by the trained soldier during the South African War. In the first place, we see that the Boers who defeated the first British attacks had no training, German or otherwise; and, secondly, we see that the British only defeated the Boers when they had sent out enormous reinforcements, the greater part of which had had no manœuvre training at all. The whole of the South African War proves not only that in consequence of the employment of rapid-firing rifles and smokeless powder, and of the universal employment of entrenchments, the methods of offensive warfare employed to-day have become inefficacious, but also that the professional soldier no longer possesses his ancient superiority over the armed civilian who has undergone the shortest course of training. The excellent defence of the Boers is enough to prove that it is not trained soldiers manœuvring with mechanical precision under the direction of commanders bestarred and belaced who are the best. It may be objected to this that the local conditions were so favourable to the Boers that their successes prove nothing in regard to a Continental war. We have tried to prove the contrary, but let us take the point of view of our opponents. We have a still better occasion to compare the merits of the regular soldier with those of the untrained man, gifted with an intelligence which has not been stunted by instruction based upon regulations and absurd manuals, for the British forces in South Africa contained a great number of soldiers belonging to both categories. On the one part, we find the Regular Army rigorously trained, and with a certain experience of war; on the other, we see a heterogeneous collection of Colonials and English Yeomanry, of whom nineteen-twentieths had never before fired a shot at manœuvres. What is the result of comparing these different types? We find that the almost unanimous opinion of competent authorities, of generals, correspondents, and soldiers themselves, is that the civilians were infinitely more useful than the Regulars. But the best proof of this is the fact that the British Government, instead of raising new battalions of Regular troops in order to reinforce the South African Army, prefers to send out Colonials and untrained Englishmen whose only qualification is a certain skill with the rifle and some knowledge of horsemanship -the latter, of course, for specific local reasons. We even find some of the Colonials so convinced of the inferiority of the training of the Regular Army that they have refused to serve under British officers, and public opinion in England has supported their action.

¹It is interesting to read the remarks of the Special Correspondent of the Frankfurter Zeitung, an officer of position and a distinguished soldier. -

"Examine the uniforms of the troops sent into the hottest country at the hottest time of the year. The straw hats which were supposed to be modelled on the headgear worn off duty by certain English and American troops, and which, notwithstanding their defects, seem to have cost too much, were all right for a summer walk in Germany, but in no way suitable for a country in which it is necessary to protect the head as much as possible against the penetrating sun rays. The helmets worn in the tropics are an inch thick. The wonder is, therefore, that we have not had to record a great number of sunstrokes, and, indeed, we should not have had such good fortune if the troops arriving in such headgear had had to engage in a really serious campaign. The khâki uniforms with which our men were provided were probably the worst ever seen in China. They were really not khâki, but a yellowish drill, which after a short time rang the changes in all colours, and after being several times washed repentedly returned to their original dirty white, and gave up all pretence of being khâki.... At least a part of the disease, so rife among the troops at the outset, must be attributed to the neglect of proper precautions.... The Japanese coolie company was got together under absolutely unheard-of conditions.... The supply department had work imposed upon them which was absolutely beyond their power. It is a good thing that we have been able to learn this lesson in China without getting it in the first instance in a European war."

²"We shall not recognise our ancient enemies the next time," said von der Goltz. And, indeed, in 1870, according to the work of the German General Staff, the Germans put into the field a little more than 1,200,000 men against 336,000 French. The losses of the Germans in this war, nevertheless, reached the figure of 127,097 men, according to their own statistics. Comparing this figure with the effective total of the men in the field, it seems only a small percentage. But this method of test gives absolutely defective results. When we analyse the losses, we see that 180,000 Frenchmen operating in the earlier battles and engagements in a month and a half put out of action 87,000 Germans, principally with their rifles, since the French artillery was ineffective

At St. Privat there were 280,000 Germans with 760 guns, against 150,000 Frenchmen with 530 guns. At Sedan there were 240,000 Germans with 725 guns, against 124,000 Frenchmen with 360 guns.

I ask, What would have happened if in place of mitrailleuses and defective guns, and even of the Chassepot, the French had employed small -calibre rifles on a smokeless field of battle? And what would have been the result if the French had been properly equipped with spades, and, being inferior in numbers, had raised entrenchments at the first moment of mobilization, as they would do to-day, and the Germans, instead of advancing rapidly, as in 1870, had been obliged to rest in one place?

"There still remains in our conception of campaigns the idea of rapidly progressing manœuvres, decisive conflicts upon the battle-field following one another in unbroken succession, swift penetration deep into the heart of the enemy's country, and as a result the obtaining of a quickly won and favourable peace. So it was in 1866 and 1870, so it is hoped for in the future. But we must recognise that we had in 1870 in the first period of the war an extraordinary superiority of numbers on our side, and in the second period

the marked inefficiency for action of the enemy's armies. But to-day France, Austria, Italy, and Russia have zealously followed up the progress made by Germany in the training of her soldiers. On all sides the actual efficiency of the troops is ever becoming nearer that of our own, and all must finally reach the same state of progress."

-VON DER GOLTZ, *Das Volk in Waffen*.

In action these civilians seem to have been superior to Regulars: their shooting was as good, I shall not say better, since at great distances and against an invisible enemy it is the number of rounds fired in a certain time, and not the aim, which tells. They took cover more skilfully, and they displayed a greater individual intelligence; they were more independent than their officers, never falling into the panics which dispersed the Regulars at Stormberg, Magersfontein, and elsewhere. Kimberley and Mafeking were defended chiefly by civilians against forces proportionally much greater than those which attacked Ladysmith, which was defended by Regular troops. Nor did the civilians surrender so easily, or in such great numbers, as the Regulars. Their improvised defence of Wepener was one of the most remarkable exploits of the war; under precisely the same circumstances the Regulars surrendered time after time. At Paardeberg, when the Regular troops had been driven back with enormous losses from Cronje's trenches, it was the Canadians who delivered the final attack which preceded the surrender. In short, the whole history of the war proves that civilians possess all the best qualities of Regular troops, their discipline and courage, and much more intelligence, initiative, and endurance.¹

It is easy to explain this superiority of the civilians over long-service Regulars by the conditions of the modern battle-field. In consequence of the dispersion of the men it is quite impossible to maintain the mechanical dispositions which are taught on parades and manœuvres. Under such circumstances officers cannot direct their men effectively, and as the men are not trained to use their individual judgments they tend to turn in-to a flock of sheep. The capacity for individual action becomes enfeebled in proportion to the training which the soldier receives. Thus if his officers are too far away to give orders, the Regular is at a loss what to do. But the intelligent civilian, whose capacity for action has been developed by his habits of sportsman, farmer, and artisan, and who is accustomed to use his own faculties independently, fights very well without orders. He is primarily better material, and as on the battle-field the order of the parade ground is dislocated, the question of superiority is decided by the faculty of initiative alone. It is this, we must recognise, which makes the superiority of the Boers over the British. And it is this no less which accounts for the superiority of the British civilian over the British Regular.

All this leads to the conclusion that it is not the mistakes made in the conduct of the war by the British troops nor the qualities of the Boers (who, indeed, have shown an entire lack of rational strategy and tactics), which has produced the results which we see on the theatre of war. It is smokeless powder, and long-range quick-firing rifles, which involve dispersion and invisibility to a degree unheard of formerly, and to the possibility of putting a larger number of cartridges at the disposal of the riflemen. In consequence.

there is no reason for supposing that French soldiers, defending their country, would prove inferior to the Boers, their quasisuperiority of fire being only a false scent.

¹It is quite true that many of the Volunteer Yeomanry lately sent out from England were complete failures. But this was not because they were Volunteers, but because they were men of bad physique, taken from the wrong class, and primarily bad material.

THE ACCUSATION BROUGHT AGAINST THE BRITISH TROOPS OF WANT OF FIRMNESS.

But we see the British troops accused of want of endurance, and it is, indeed, a fact that on several occasions after insignificant losses they have retreated and surrendered. We even see an order issued by Lord Roberts to the effect that British soldiers raising the white flag will be court-martialed - an order which has had the effect of increasing the accusations of cowardice brought against the Army. But the fact is, as I pointed out in my book, that the new conditions of warfare are such that although the losses sustained are small when compared to the total number of the troops, these losses are, nevertheless, of such a character that no civilised troops could sustain them without losing moral. This fact has been well known for many years past. General Kuropatkin, now Russian Minister of War, who took part in the war of 1877, expressed the opinion that "Troops do not give way so much owing to an inferiority of number, which forbids them holding on (they might resist even after losing 75 per cent. of their effective), or in consequence of the losses which they have sustained, but owing to fear of losses which they expect if they remain where they are, or continue the attack."

The space of time in which the losses were inflicted is also a most important factor, and we know that in most of the cases in which the British gave way in South Africa the losses were inflicted very suddenly and in a very few minutes.¹

¹In the second volume of my book I dealt especially with this subject. I set the question: What will be the moral state of armed masses in the present new conditions of war, in the event of defeat, and even in case of victory, if the battle be a long one, as must be expected? I attempted to search for statistics elucidating this problem, and took separately the constituent elements of the different nations, regarding also the modifications which have taken place in the composition of troops, armaments, and tactics. But I came to the conclusion that while it is possible to deduce from these statistics a comparison of the different qualities possessed by one or another armed nation, it is difficult, and even impossible, to formulate with any simplicity, an appreciation of the whole; all the more so as these moral conditions will be different in a defensive and an offensive war.

For the sake of simplicity I tried to determine in approximate figures the different characteristics of the troops of the various Powers from the double point of view of their employment in attack and defence. I used here a procedure applied in the statistics relating to the morals, education, and sanitary condition of the various countries, and made comparisons expressed in figures which represent the comparative value of the different armies in attack and defence. For unity of comparison, I took the figure 100 to express the maximum of each quality which goes to make up what is generally called the moral of an army. These qualities are: - 1. Capacity to adopt oneself to a new situation. 2. Composition and recruitment of officers. 3. Faculty of initiative. 4. Endurance under fatigue and privation. 5. Discipline. 6. Absence of egotistical tendencies dangerous to the general good. 7. Confidence in commanders and comrades. 8. Age, spiritual condition, and manner of recruiting of men. 9. Confidence in the value of their armament. 10. Courage.

I did not at that time occupy myself with the British and Boer armies, having then no motive for doing so. If I made such a comparison to-day I should say that in all cases the British Army was infinitely superior to the Boers, who have no discipline, and for the offensive were almost useless. But it is that which made their success.

The opinion of the Austrian Attaché, Captain Trimmel, shows the *moral* of the British soldier in the most favourable light. He says:—"In face of the Boers, soldiers by birth, the British soldier was evidently in a difficult position. But it would be a mistake to think the latter mediocre. Calm, insensible to danger, gifted with great *sang-froid*, strong in moments of reverse, sustaining privations bravely, obeying his officers blindly -such, was the British soldier, and to a great extent the Colonial. The high moral qualities of the British officers have never been denied by the greatest enemy of England. They possess a great firmness of character and a profound practical sense. Their moral value was shown most in the day of defeat."

And I may say also that this testimony was given after a year and a half of warfare, and it is an incontestable fact that the longer a campaign lasts the more a disciplined army deteriorates, and, on the contrary, a guerilla army, like that of the Boers, improves.¹

¹The commander of an army can alone protect it from that greatest enemy of civilised soldiers -weariness of war, and indifference as to its results.... It is worth bearing in mind the teaching of history that the Armies of modern military States, well disciplined though they may be, but trained in the systematic school of peace, gradually depreciate in a lengthy war, while hastily assembled levies, if successful in the field, improve with time. We see examples of this not only in the case of the armies raised by the first French Republic against the Coalition, but also in the American War of Secession, and in a special degree in the levies of the French after Sedan.... In such case field experience provides the training.... They begin as volunteers and conscripts, but in the end they become soldiers who are often proved victorious over their better trained adversaries. But the soldiers of a Regular Army, accustomed to quite another state of things, do not

easily find themselves at home in dealing with such national levies." -VON DER GOLTZ, Krieg und Heerführung.

An English general expressed the opinion that, in order to develop courage, it was necessary to have spectators. But the soldier in a modern battle must perform his act of courage far from the eye of his commander, and sacrifice himself without being seen and without any other motive than patriotism. Of course, when it is a matter of defending the country from invasion, as, for example, in an invasion of France by Germany, the French soldiers would be marvellous. But can we count upon such manifestations of courage for a secondary object? And there exists no serious motive for war, as I should in the sixth volume of my work, while showing the possibility of resolving the questions by an arbitral tribunal. For in an offensive war there will be no other objects. There certainly exists no Army with men braver, and more contemptuous of death, than the Russians. Yet what do we see? M. Botkine, the celebrated professor and physician of the Emperor Alexander II., during the war of 1877, at a time when rifles and artillery were much less murderous than to-day, and smokeless powder did not exist, wrote: - "The heroes have had their day, they have lost their prestige, since each knows that heroism has no longer any importance.¹ Botkine wrote later, after the unfortunate assaults on Plevna, as follows: -

"Sklifassovski (Surgeon-in-Chief of the Russian Army before Plevna) says that one could form a whole regiment of men who have simulated wounds, or have wounded themselves in the fingers, after the example of the Servian soldiers. In this there is no case for astonishment: the soldier sees in the Turk a stronger enemy than himself-, the Turks are sheltered behind earthworks and their arms are superior to our.... But one dare not speak of these false wounded in the reports any more than one can speak of deserters. Each officer thinks it his duty to say that, in spite of the great losses, the *moral* of the troops is excellent, that they reformed in good order and singing. However courageous men may be, however excellent their *moral*, these qualities need to be fed by success. But under present conditions where we are beaten everywhere, these qualities are exhausted, and the bravery and power of resistance of the men have disappeared."

Letters from the theatre of war, 1877-78.

In the Transvaal War, and for the reasons already enumerated, the British have been in much greater difficulties than were the Russians before Plevna. We remember that the Highlanders lost 670 in three minutes. In my pamphlet on "The Transvaal War and its Problems," I said: -"It may very well be that less cultured soldiers and officers than the English could stand even more than they, but in the course of the shortest time all, to the very last man, would be killed. Therefore, before bringing accusations, it would be wise to consider every separate occasion, and in the great majority of cases I am convinced that, instead of condemning those who have surrendered, it would appear to military men worthier to cry 'honour and glory!' and to express gratitude for the moral

courage which refuses to sacrifice innocent men in vain. Once it is impossible to obtain results, every man lost means simply murder, which is all the more shameful since such murder is not only unpunished, but glorified as heroism." And I have not changed my opinion.

THE PRETENDED DEFECTS OF THE BRITISH ARTILLERY.

Still another subterfuge is used to explain the results of the battles of the South African War; that is, the pretended defects of the British artillery and of its service. Now, as it is admitted that without the support of artillery, infantry, even in inferior numbers, cannot be dislodged from a strong position, and as the Boers fought almost always behind shelter, a sufficient reason for the British reverses is found in this.

Owing to the English practice of carrying out the artillery preparation by itself, and holding the infantry back, the Boers were never forced to leave their cover and show themselves. If, as is directed by the new German Regulations for Field Artillery, the British had felt their way by pushing forward and engaging their own infantry simultaneously with their artillery preparation, they would have compelled the defenders to man their works and show their troops. Thus many serious disasters would have been avoided. -*Militärische Jahresbelichte*, 1900.

Let us examine how far the reproach against the British artillery is well founded. The first thing to be noted in this respect is that the British in the majority of the actions in which they suffered reverse had infinitely more numerous and powerful artillery than the Boers; so that when the British defects are explained by the insufficiency of their artillery we are reminded of the answer given by the huntsman to his son, who asked what he wanted the shot for. "To kill the bird," answered the father. "But the bullet?" "To kill it deader still." The fact is that in most of the battles of the war it was not the deficiency of the British artillery which led to reverse, but the absolute impossibility of employing that artillery, which as far as numbers and weights go, was plentiful. The British artillery in South Africa was more than sufficient to destroy all the Boers in the field several times over. But, in fact, it seems to have caused scarcely any loss to the Boers at all. The reason of this is obviously the perfection of the entrenchments employed, and the fact that artillery fire against entrenchments has practically no effect. If the failure of the British artillery was due to its inferior quality or defective service we should have expected the Boer artillery, at least, to have caused heavy loss to the British. In fact, however, the Boer guns when turned against British entrenchments caused absurdly small loss. The losses of the 4 months' bombardment of Ladysmith amounted to no more than 250 killed and wounded. The artillery on both sides was indeed sufficiently powerful. But the whole course of the war shows that the first effect of smokeless powder is to make it impossible to determine the exact position of the enemy's entrenched riflemen.

Two facts prove in the most decisive fashion the destructive power of modern artillery, and at the same time its absolute powerlessness against good entrenchments that is to

say, the siege of Cronje at Paardeberg, and the attack carried on by the Boer artillery against Spion Kop.¹

The hope cherished by soldiers of shaking the defenders by the use of explosive shells has also been proved to be a deception, not only in consequence of the difficulties in determining the enemy's position, but still more to the ingenuity of the Boers,² which will certainly be emulated in a future Continental War.

¹These two attacks offer certain points of resemblance. At Paardeberg the Boers had 4,000 men; the British on Spion Kop were about equal in numbers. In both cases the defenders were narrowly packed into a very limited space. But the Boers fortified Paardeberg, whereas the British, owing to the rocky nature of the ground and other circumstances, found it impossible to raise entrenchments at Spion Kop. During ten days the Boers at Paardeberg were exposed to the bombardment of from 50 to 100 guns. They lost only 179 men, the greater part of whom must have been wounded during the abortive infantry attack. They were thus perfectly protected by their entrenchments, which were inaccessible to projectiles. At Spion Kop, on the contrary, the British were subjected to the fire of only 7 guns, and they were not bombarded for more than 24 hours, yet they lost nearly 1,500 men, mostly from this artillery bombardment. At Paardeberg the British had ten times more guns than the Boers had at Spion Kop, and their bombardment lasted ten times longer. By taking each cannon and each hour as a unit, we find the British bombarded the Boers with 18,000 hours' cannon, and the Boers only 168, yet the Boers lost only 179 men and the British 1,500—that is to say, the British bombardment was 900 times less effective.

Calculated mathematically, the British had 100 times more chance of destroying the Boers at Paardeberg than the Boers had to destroying the British at Spion Kop. Calculating on the experience of Spion Kop, the British artillery at Paardeberg ought to have destroyed 150,000 Boers.

Yet the result of the employment of this vast machinery of destruction, being employed against well-built entrenchments, was to cause the Boers a loss of about 40 men. For it may be assumed that the rest of the Boer losses were suffered, as I have said, during the infantry attack which preceded the investment.

²From the reports written in South Africa we find the Boers using the following devices in their entrenchments: - They constructed traverses at short intervals to prevent enfilading, and to limit the effect of explosive shells. Their bomb-proof shelters were constructed after the model of a bottle with a narrow opening, so that a shell could enter only by chance. Other trenches were constructed in a sinuous line, and a shell bursting in such a trench could wound only the two or three men in the section in which it fell. In addition, they dug caves in the fore parts of the trenches which were completely bomb-proof. These trenches were invisible, and masked by brushwood and other objects, so that there were 1,000 chances to 1 against any shell failing in them. Even when a shell did fall, the method of construction was such that its effects were confined to the actual point of fall.

But, in fact, the experience of the Russo-Turkish War was such as to make this result foreseen, but as it was not convenient for soldiers to admit that infantry attack had become immensely difficult, and that, therefore, war was practically impossible, it was paid no attention to. "At Plevna," says General Todleben, "we fired on the entrenchments for a whole day in order to kill a single Turk." We find the same phenomenon repeated in the South African War, in spite of all the improvements in artillery and the employment of explosive shells. All combinations founded on the efficacy of artillery for shaking men on the defence broke down before this cardinal feature of the war -the invisibility of the enemy. The Austrian *attaché*, Captain Trimmel, in his lecture on the South African War, says that at a certain moment at the battle of Waterwaalsdrift he stood with the American *attaché* between the lines of the two armies. He could see nothing either of the British or of the Boers, and had it not been for the noise of the firing he would not have believed himself to be on the field of battle.¹

These facts upset the explanations which are given of British reverses by attributing them to the insufficiency of the artillery. The material was more than sufficient, and the tactical principles of the British field artillery are in general the same as those accepted in all the Armies of Europe. Employment of masses of guns, unity of fire command, employment of the ground to bring the batteries into action under cover, co-operation and mutual support of the various arms-these are the maxims that hold the chief place in British tactical exercises. The British artillerists were professionals, and thanks to their national aptitude for mechanics they ought to have been better able to serve their guns than the soldiers of other nationalities. And the military authorities who have devoted themselves to the study of this question declare that three months are sufficient to make excellent artillerists.

¹Captain Trimmel says: - "The fire of the British was generally inefficacious, owing to the difficulty of appreciating distances, for it was never possible to see the enemy's fire (except at night). This want of effect arose also from too high bursting of the shells, sometimes at from 80 to 100 metres, the fragments being then no more dangerous than stones. The lyddite shells were of little use against troops in loose formation, and the murderous effects expected were not realised. The artillery fire was generally opened by the naval guns at between 9,000 and 11,000 paces, and then continued by field guns up to about 4,000 paces, then ceasing. Experience shows that guns which approached closer were too exposed."

THE SUBTERFUGE OF CONDEMNING THE BRITISH COMMANDERS FOR NOT EMPLOYING TURNING MOVEMENTS.

Still another reproach brought against the British commanders is that they did not employ till too late the tactics afterwards adopted by Lord Roberts of turning the enemy's position. The routinists, who wish to explain the failures of the British by the defects in their training, say that the Boers held themselves upon an absolutely passive

defensive, based exclusively upon, their fire and material obstacles. They filled their trenches with riflemen, and used their arms with a veritable mastery; but they remained fixed to their posts, had no reserve to send to the counterattack, no men to repair local defections, such as that which took place at Modder River. All was preconceived in their defence, which consisted merely in barring the road to the enemy, and not in beating him. Any Continental Army, we are told, would have beaten the Boers long before, and the war would have been over long ago, and never have taken the character which it actually did. But it is a great question whether the mistakes of the Boers were not really a part of their safety. First, if instead of putting in action all their rifles, they had kept reserves, they would have diminished the strength of their firing line, and it is the number of shots fired, their *rasance*, and penetration which tell. The Chilian War, moreover, showed the danger to which reserves are exposed from shots fired too high, sometimes more than the attackers. All past theories as to the employment of reserves must undergo a change. As concerns turning movements, even admitting, what I do not wish for the moment to dispute, that there is a certain amount of truth, still the methods recommended have no importance for the war of the future. No European Army would follow literally the tactics of the Boers. By the force of things, having armies composed of millions of men, they will have reserves; only I must repeat that they will be unable to use them in battle, though they will be used to oppose turning movements. General von der Goltz, in his last work ("Krieg und Heerführung"), which appeared only a few weeks ago, and who, therefore, had the consequences of the Transvaal War under his eyes, says that "of a hundred attacks intended for turning movements, experience goes to show that eighty end by coming upon the enemy's front." We see this already at the great peace manœuvres, but it will happen more generally in war.

The South African War furnished us with examples of this situation before the superiority of the British became overwhelming to a degree impossible in Europe.¹ But if both frontal attacks and turning movements are impossible in Europe, how can aggressive war be carried out?

¹In Natal, General Buller had a great numerical superiority. Nevertheless he failed twice in his attempts to turn the Boer flanks in consequence of the presence of strong natural fortresses on their flanks, and in consequence also of the rapidity with which the Boers, on interior lines, changed front, and turned what ought to have been a flank attack into a frontal attack. For Lord Roberts' turning movements to succeed it was necessary to have a force which at the beginning the British did not possess.

After deducting 40,000 men for the line of communications, and making allowance for corps that were under full strength and men in hospital, Lord Roberts had 134,000 men fit for the line of battle. But Lord Roberts, before attempting a movement against Cronje's camp at Magersfontein, which was defended by 6,000 or 7,000 men, had to create an army of 70,000 men, or 10 to 1. All the battles on the road to Bloemfontein and Pretoria were of the same character; the superiority of the attack was always 4 or 6 to 1. The method of attack was always the same. The Boers were bombarded or

attacked in front by infantry, and enormously superior forces of cavalry, or, more correctly, mounted infantry, were marched round their flanks to menace their line of retreat and to cut them off, as they had cut off Cronje at Paardeberg. In this fashion the Boer were obliged to evacuate their positions one after the other, after slight losses on both sides. Nevertheless they invariably retired in good order, carrying away their transport and guns, though the latter were heavier than the British guns.

Now, it is clear that such methods could not be employed in a Continental war. In the first place, no Army will possess the enormous numerical superiority which such a method demands, and if, thanks to more rapid mobilisation, a Continental Army enjoyed for a few days a considerable numerical superiority, even if it could turn the flanks of its adversary and surround him, it would be impossible to starve him into surrender or destroy him. At the end of a few days it would find itself in the position of the Boers at last before Ladysmith, who found themselves forced to raise the siege and decamp before the threat of the British forces marching to the relief. But this change of situation in Europe would take place in a few days, instead of, as in Natal, a few months. Another difficulty also stands in the way of turning movements in Europe. If Lord Roberts was able to turn his great numerical superiority to profit in order to turn the Boer positions, it was because he operated on territory where the defensive found no protection for their flanks. In Europe the situation will be very different; the fortresses established on all the frontiers, and the natural obstacles, contructions, hedgerows, and walls will permit an army numerically inferior to occupy positions which it will be impossible to turn. Thus, just as the South African War proves that frontal attacks without an impossible superiority of numbers are impracticable, it proves no less that successful turning movements can be made only under conditions which are rarely found in Europe, that is to say, a large initial numerical superiority, and the absence of fortresses or strong natural defences on the defenders' flank. The resources and conditions of which Lord Roberts availed himself in order to turn the Boer positions do not exist in Europe.

RÉSUMÉ OF THE LESSONS OF THE SOUTH AFRICAN WAR AS TOUCHING UPON THE PROBLEM OF A GREAT EUROPEAN WAR.

From what I have already said, it seems to me evident that the lessons of the Transvaal War are applicable to a war in Europe -that is, of course, if they are applied with due prudence. The local conditions, whether climatic or topographical, and the great distance from the base do not prohibit this. None of the explanations given of the long duration of the war and the serious consequences which it has entailed for England-that is to say, the supposed imperfections of the British soldiers in the conduct of the war, want of endurance and of courage, insufficiency of material, defects of the artillery, and the too late employment of turning movements - are in any way justified. I do not believe that any other Army in the same condition of inexperience, guided by, philosophical speculations drawn from manœuvres and the wars of the past, would have done any better; on the contrary, it is probable it would have entirely failed. It required the great experience acquired in foreign campaigns, as well as the immense material resources of England (and let me say, also, the moral qualities of the English people in supporting

difficulties without murmuring and without internal revolution) to arrive at even the point at which England is at the present moment.

But whatever be the opinion upon this question, it is evident that the main lesson to be drawn from the Transvaal War is that it is absurd to suppose that, whatever combinations be formed by any State or alliance of States, the results of a war of aggression can be regarded as hopeful against any great Power, or still more so against an alliance of Powers. That this lesson has been appreciated at any rate in some quarters in England is shown by Mr. Brodrick's declaration, that the result of the Transvaal War showed that troops holding themselves on the defensive, and armed with modern weapons, can resist a long time an enemy much more numerous, and inflict upon them terrible losses.

I will attempt briefly to indicate the reasons which have led to this state of things. At first there are the improvements in armaments, the introduction of smokeless powder, all turning to the advantage of the defence.¹ The consequence of this increase of the power of the defence is that the duration of a war must be very great. It must be foreseen that any attempt at invasion would fail infallibly in consequence of the economic and financial perturbations which would follow in its train. The invader, while still having enough men and arms, must conclude peace. In my book on "The War of the Future" I pointed out the reason why this must be, and no serious refutation has yet been attempted. On the contrary, military men in some quarters have begun to declare the same thing. Thus, in the fifth edition of his remarkable book, "The Nation in Arms," General von der Goltz adopts this view, saying: -"We may predict that wars can only terminate by the complete destruction of one, or the exhaustion of both combatants." In 1897, another high authority, the Austrian General von Kotié, expressed the same opinion, saying: -"Is it possible to keep for a long time such great numbers of men under arms without plunging the civil population into misery?"

¹The Transvaal War furnishes lessons very precious in all its phases: first, when the British forces were numerically inferior, and the Boers took the offensive; secondly, after the stoppage of the Natal invasion, when the British with superior forces attempted a counter-attack; and, thirdly, at the time when the British forces were ten times greater, and the war took the character of a national struggle. In fact, what have we seen? When the war broke out in October, 1899, the British forces in South Africa did not amount to more than 22,000 men. These troops were scattered over the whole surface of an immense semi-circle, extending from Northern Natal along the frontier of Cape Colony to Mafeking on the western border of the Transvaal. Strategically, the Boers had the advantage of holding the inner line, and they were able to concentrate their forces in order to attack the British. The exact number of their forces to this day is not known, but they reached at least 35,000-that is to say, 60 per cent. more than the British, and probably were 45,000, or 100 percent. more. Most of these men had been mobilised and sent to the frontier before the beginning of operations. According to the ancient conditions of war, they had therefore every advantage. Nevertheless, their invasion of

the British colonies failed utterly. They, indeed, gained many tactical advantages, but these were only in isolated battles where the British took the offensive. Strategically, the Boer invasion was stopped everywhere when it came into contact with inferior numbers of British behind entrenchments. The invasion of Natal was stopped at Ladysmith by an inferior British army. In the west the Boers were stopped at Mafeking and Kimberley. In Cape Colony they were stopped at Colesberg and in the Stormberg district; and yet on each of these theatres of war they had at first superior numbers. This check to the Boers must be attributed to one of two causes; either the inferiority of the Boers as soldiers, or to the inherent difficulty of attack under modern conditions. Now the fact that the Boers were not on the whole inferior to any disciplined Army is attested not only by the British themselves, but also by the disastrous reverses suffered by the British when they took the offensive. We are, therefore, compelled to conclude that the first period of the war confirms my thesis that modern arms have rendered attack much more difficult than it was formerly.

But if the failure of the Boer invasion proves this difficulty of the offensive, the second period of the war is a still better proof. While the Boer invasion was being stayed by inferior British forces, considerable reinforcements were arriving from England, and a few weeks after the outbreak of war the Boers were largely outnumbered. Convinced of the impossibility of continuing their invasion they took up strong defensive positions to the South of the besieged towns. In these positions they were attacked again and again by British forces much superior, and, nevertheless, they not only maintained their positions, but repulsed the British with heavy losses. In Cape Colony they drove back General Gatacre, and stopped the British advance for three months. At Magersfontein they defeated superior British forces in such a way that no further operations were undertaken in the district until the arrival of reinforcements had given the British a superiority of 10 to 1. In Natal they repeatedly repulsed General Buller on the Tugela. At Colenso, the British had 20,000 men, and the total number of Boers in Natal does not seem to have been more than 15,000, of whom a large number were engaged in watching Ladysmith. According to Boer reports the British had a superiority of 3 to 1. Yet three times they drove much superior British forces back over the Tugela, and it was only when a large number of Boers had been withdrawn to the assistance of General Cronje that the British advance was continued successfully. On 6th January the Boers made a desperate and well-prepared attack on Ladysmith, which failed, as all frontal attacks failed in this war. But everywhere they defeated the efforts of superior British forces to dislodge them from their positions.

The first two periods of the war teach, therefore, the same lesson. In the first period the Boers, with a numerical superiority, attacked inferior numbers of British, and failed entirely. In the second period the British, with a considerable numerical superiority, counter-attacked with the same result.

All these facts taken together point only to one conclusion, and that is that the difficulties arising from the improvements in modern arms have rendered attack almost impossible even with a great superiority of forces. This superiority the British possessed, but the conditions could never be repeated in a great European war between Great Powers. In

fact, while the Boers at once sent all their men into the field the British, thanks to the resources of their vast Empire, were able to augment their forces, so as to ensure a superiority in numbers far greater than would be possessed if all the Great Powers of Europe were to form a coalition against a single one. Towards the middle of February, 1900, when the Boer forces were probably reduced to 30,000 men, the British had in South Africa an army of 200,000, that is to say, in the proportion of 7 to 1. Yet incredible as it may seem to one who has confined his study to the wars of the past, it is, nevertheless, true that in spite of desperate efforts the British never occupied a foot of Boer territory until they possessed this superiority of 7 to 1. Then only they were able to advance with success; and they required 60,000 more men to complete the invasion and to begin the third period of the war. But this period is not less instructive than the two preceding as to the advantages of the defensive. The British, though they lost several isolated detachments, seemed to triumph everywhere. An army of 60,000 men was able to deliver Kimberley and to capture Cronje's force, though, indeed, only because Cronje had committed unpardonable mistakes. From Kimberley the march was continued to Bloemfontein and then to Pretoria, which was occupied in June nine months after the opening of hostilities. During this advance the Boers were always in enormously inferior numbers, and they were forced to evacuate position after position, but they succeeded in inflicting some loss upon the invaders, and always managed to withdraw their men and guns in safety. After Cronje's surrender the British never succeeded in making at one time a large number of prisoners or in inflicting heavy losses upon the Boers. The war, therefore, we see never entered upon the decisive path expected by military men, who judged simply by the experience of past wars in which a serious defeat or the loss of a fortress changed the face of affairs, and allowed the victor to march straight into the enemy's country. Four or five times, notably after the capture of Cronje, the occupation of Bloemfontein, the entry into Pretoria, and finally after the successful march of the British to Komati Poort, the British critics announced confidently that the war was over. But these critics neglected two factors of the new situation, the one a military and the other a psychological factor. The military error was the more excusable. For judging by the past the critics thought that a beaten army and occupied capitals must lead to the submission of the enemy. They left out of view completely the fact foreseen by those who had studied the effect of improved armaments that these weapons not only make the defensive much easier than before, but are extremely favourable to the carrying on of partisan warfare, making the nation en masse much more redoubtable than formerly. Thus a year after the occupation of Pretoria we see the Boer army, which does not now number more than 15,000 men, holding the field against 250,000 soldiers, in a country which is called conquered, but is actually unconquered outside the railway lines, and these handful of Boers have made it impossible to set up any kind of civil administration in the country.

Such was the military delusion. But there is a perfect analogy between the military and psychological delusions. For while the military experts ignored the fact that smokeless powder and improved fire-arms had rendered the defence much easier than before, the political experts ignored a prime factor in the social development of the last century—that is, that the increased spirit of nationality which is shown everywhere makes an armed nation much more dangerous than before. The political experts ought to have foreseen

from a moment's study of this factor that the Boers would display the highest ardour in defending their independence. Now the refusal to treat with the Boers, as ought to have been done after the occupation of Pretoria, changed the character of the war entirely, and gave birth to the new period of defence, the fourth of the war. The national war had begun.

The advantages of the defensive are still more manifest in this period than in those which preceded it. Everywhere we see handfuls of Boers capturing isolated British detachments, seizing convoys, cutting railways and telegraphs, and making the provisioning of the British so difficult that many have been on half rations for a great part of the time.

The British, as the Times correspondent expressed it a few months ago, can no longer expect a single movement or even a great victory to put an end to the war. Individuals may surrender, but there will always remain a certain number of Boer commandoes who will evade defeat. But they will nevertheless continue to harry the British forces until worn out or exterminated.

If we witness nothing of this kind in England, it is, of course, that the conditions are exceptional. It must be said that no country with conscription could carry on such a struggle. England sends Volunteers; very different would be the situation of a country with conscription. The despatch of troops fresh to Africa does not influence appreciably England's economic state. Production and circulation follow their paths. But in a conscript country, on the contrary, a great war, which should last as long as many writers like Moltke, Leer, Blume, and von der Goltz have predicted, would probably produce revolution; and it may, indeed, be asked whether England would have not met with other, but still greater, difficulties if she had possessed a Conscript Army.

I cannot pretend to dictate to you concerning the details of the South African War, which you know much better than I. But what do they prove when taken together? That the progress in the art of war which has taken place in the last ten years is greater than that which had taken place since the invention of powder, and that these improvements have tended to stultify themselves by producing a deadlock in the realisation of the objects of war. The circular convoking the Hague Conference contains an affirmation of this fact, which it would require great levity to contest: -"Millions are spent on the construction of engines of war of an unheard-of power. These engines which pass to-day for the last word of science will be put aside to-morrow as the consequence of some new discovery in this domain."

The further object of my lecture will be to attempt to prove to you that even to-day, putting aside probable improvements in the future, no results can be obtained in a great European War, and in consequence war has become impossible to wage decisively, and can only lead to social cataclysms and provoke revolution. And that England, while creating the most formidable army for interference in a Continental war, would obtain absolutely opposite results. England has no need for a formidable army that would be nothing but a criminal toy, which would waste the savings of the classes who are the

most necessitous of the country, and would awaken a different spirit in the nation. The spirit of independence and initiative which has made the greatness of England would be weakened and diminished. England would only be in the position of playing the game of Germany which, as Lord Rosebery has justly, said, after her military victories of 1870 prepares for a more important victory in the commercial domain. In such a war the army put into the field by England would not weigh an ounce in the scale. The *folie des nombres*, as Count Caprivi expressed it, which has made armies numbering millions of men which can never be employed. But as economic resources must, decide a war, England would weaken herself by creating a great army, and by that very fact would diminish her importance. For a defensive war England has no need of an army in the old sense of the word and for Colonial purposes her army must be specialised.

So far I have only attempted to show how far the lessons of the South African struggle might be taken as applying to the case of a great war in Europe, the chief lesson being that the improvements in arms, and the corresponding changes which have taken place in tactics, have given a great advantage to the defence. I deal now with the much more important question of the consequence of this fact, my conclusion being that, although any of the great Powers on the defensive should mobilise only a part of the forces which compulsory service puts at its disposal, the attacker could not attain his object. But this question, primarily a military one, involves also the most important economic problems, because if it can be shown that war will be long and indecisive, we must consider its effect upon civil life. The chief phenomena of this condition of things would be a rise in the price of all the necessaries of life, a consequent panic among the population, the loss of private incomes and public credit. But as this internal disorganisation is incompatible with military endurance, we are driven to the conclusion that before military successes can be gained which will be sufficient to impose peace on the conquered, the bankruptcy of internal resources must put a stop to the war.

I have already dealt with this question at length in Germany, one of the countries most directly interested. In the *Deutsche Revue* I published an article entitled "The Lesson of the Transvaal War for Germany," pointing out these facts. In one of the following numbers an officer of the General Staff published an article in which he called my arguments "Trugschlüsse" (false conclusions), in view of the fact that the lesson of the Transvaal War cannot be applied to Germany.¹ I have already given what seem to me good reasons why the lessons of South Africa do apply, and in due time I shall point this out to my German critic; but seeing to what a degree the Continental soldiers try to disfigure the facts of the South African War, and to forge arguments which have absolutely no other use than to misrepresent the facts, as, for instance, by citing German efficiency in China, and also in view of the fact that in England articles have been published by eminent soldiers and politicians declaring that the South African War teaches nothing, I hope, in view of the gravity of the subject, you will pardon me for casting a general glance at the real way in which the lessons of the South African War will apply in the case of an European struggle.

¹It is worth quoting a characteristic passage from this reply. -

"No one will accept as a model the ill-advised attack formations of the British, and the reverses they suffered therein were actually foretold in advance by military experts who knew their tactics.

"A further deduction made by M. de Bloch is, that the guerilla warfare now in progress in South Africa would, if adapted to the circumstances of an European country, make a decisive result impossible. But the action of the French franc-tireurs in 1970 did not make a decisive result impossible. And improved weapons cannot make much difference in this matter, as I hold it to be impossible for the whole of a highly civilised nation like the French to carry on a guerilla war. There is a difference between the simple conditions of life in the Transvaal, and the highly developed social organisation of Europe, where we cannot find a nation able to endure patiently the burdens, privations, and sacrifices of such a war. The longing for peace becomes at last so strong that it outweighs everything else.... For the unprejudiced observer only one deduction can be made from the Transvaal War, the complete unfitness of the English military system, witnessed years ago by military authorities, who predicted what would happen if it were seriously tested. But when M. de Bloch, completely mistaking the difference between the English and German Armies utters the opinion that "There will be a decline of stamping about the drill ground, which is usual in the German Army,' we may remind him that life in the German Army gives something else to the men, namely, training, which is not to be had in the English Army. Drill and training have made our Fatherland great, and have just brilliantly stood the test in China. And, if need be, in the future they will gloriously endure still more serious tests."

THE CAVALRY QUESTION.

The question of the use of cavalry for irruptions and reconnaissances rises first. Three-quarters of European cavalry forces will be on the frontiers for the purpose of making incursions into the enemy's country. Two hours after the declaration of war the cavalry will have taken the field, and, on the other hand, measures will be taken in order to prevent destruction by cavalry. But whatever be the result, there is no doubt that the hatred unchained by such incursions will have an effect upon operations, as one of the best means for the better preparing of the ground for a national war. At present we see many military authorities declaring that the sacrifices made in order to increase the number of cavalry are not well founded.¹ The South African War confirms entirely this opinion. For reconnaissances they failed, and for charges they were found useless. Reconnaissances such as those projected by von Moltke in his plan of campaign seem absurd nowadays, when the effect of rifle fire is so great that Lord Roberts, as he lately told us, had to increase the distance between the files in infantry attack from 6 paces to 10 and then to 20.

In regard to reconnaissance, the Transvaal War shows that the thorough reconnaissance of the enemy's position can only be the business of scouts working on foot, who will by stealthy approach obtain the information which is indispensable for the

arrangement of an attack that is to have any certainty of success. For reconnaissance, cavalry has undoubtedly lost its old rôle. But attacks of cavalry in mass belong no less to the past if we may judge by South African experience. Before that war broke out calculations had been made that if a cavalry attack by 2,600 horsemen was made against a battalion of infantry from a distance of 800 metres, they would be destroyed by the time they got to within 100 metres. In South Africa, the British cavalry were never able to make such attacks; and since troops on the defensive in a future war will be, as the Boers were, always entrenched, we must eliminate all cavalry charges, as far as the scheme of attack is concerned.

¹The German official Jahresbericht, for 1900, tells us that "The idea is gaining ground with regard to the proposed incursions of great masses of cavalry into the enemy's country during the first stage of mobilisation that the gain would not be equal to the price paid. With a well-organised and active frontier guard, flying columns could succeed in drawing hostile cavalry into positions where it would be enveloped and broken up, by depriving it of rest and food, so that the cavalry thus sacrificed would be lost for subsequent operations."

Against artillery, cavalry attacks seem equally impossible. To be effective, they must be in the ancient formation, and in such formations shell fire, shrapnel, and machine guns must cause such losses that the remnant will be forced to retire, if any remain. Meetings of cavalry with cavalry will also probably take place no more. As to the use of cavalry by the defenders, it may be asked why, when having put his troops under good cover the defender is certain of victory, will he expose his cavalry in counter-attack?

It seems also that cavalry has lost its rôle in the pursuit of a flying enemy. In South Africa battles were practically never decisive in the ancient sense of the word, and the British cavalry, which is certainly among the best, was never able to carry out movements which would oblige the Boers to abandon their guns and surrender *en masse*. It cannot be doubted that the same phenomenon will be repeated in the future, since it arises from a permanent feature of modern battles, the great distances between the combatants. Cavalry, indeed, rendered great services in South Africa in the carrying out of rapid movements in turning the enemy's position, but the actual fighting was almost always the work of men on foot.

And since neither reconnaissances nor cavalry attacks are feasible, and the principal use of cavalry is the making of quick marches, the long service and present methods of drill exacted from cavalry are useless, if only measures are taken to enlist for cavalry regiments men who are accustomed to horsemanship.

From all this the conclusion must be drawn that neither the training nor education of the German or any other Army can change these facts as to the new condition of cavalry in warfare.

ARTILLERY.

In the use of artillery the Transvaal War furnishes the most important lessons. Before that war it was axiomatically admitted that without the concurrence of artillery, good infantry even very inferior in number could not be dislodged from a strong entrenched position. But South Africa in this respect has taught a lesson. It tells us first that it would be absurd not to assume that infantry on the defensive will always *entrench*, from which we must conclude that the conduct of the battle depends largely upon the artillery. But the action of artillery in South Africa has been, in general, absolutely contemptible against an entrenched enemy. It never caused heavy losses, obliged the enemy to disclose his position, or shook his *moral*. Yet in these battles the attackers had from four to twenty times as much artillery as the defenders, a superiority which no European Army would possess.

All through the South African War the only example of heavy loss from artillery was at Spion Kop. There, indeed, the British suffered terribly from the fire of the Boer shrapnel. But that battle is itself the best confirmation of the lesson I have drawn as to the valuelessness of artillery against entrenchments. For at Spion Kop the British did not entrench, and were crowded together on a small hill-top without any protection. Therefore they lost enormously. But in every other battle artillery was almost without effect, being used against good entrenchments.

The old theory that a great superiority in artillery is sufficient to silence the fire of entrenched men, and prepare the way for infantry attack seems to be an illusion. There is no exaggeration in saying that British batteries were often engaged against separate Boer guns without succeeding, after a cannonade lasting hours, in silencing one of them permanently, or even appreciably improving the conditions of the infantry attack. The tactics adopted by the Boers of shifting the position of their guns, and the slight effect of explosive shells, seem to explain the powerlessness of artillery in engagements.¹

THE CHAIRMAN: - It is our usual practice to carry on a discussion after the lecture, but as we have not completed what M. Jean de Bloch is going to tell, us, as it is rather late in the afternoon, and as, further, those of you who have followed the paper will have noticed that some of the most valuable matter is in the notes, which it has not been possible to read in connection with the text, we propose, unless anybody is ready at this moment to say something that may be of value, to postpone the further part of the lecture and the discussion till next Monday.

¹As for the use of shrapnel, the British had excellent conditions at Paardeberg. They had 100 guns in commanding positions, and were unopposed by the enemy's artillery; the ranges were exactly known, and the fire directed from a balloon. Yet the entrenched Boers lost no more than 179. The accuracy of the fire is certain, for shrapnel cases were found scattered freely within from five to ten paces of the Boer works. Shell fire was equally ineffective, as shown by the losses, and the ease with which the Boers held to their entrenchments.

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With the 5,135,000 soldiers of the Triple Alliance, and France and Russia's 5,354,000, what importance could a British addition of several army corps have?

It is probable that the neutrality of Belgium and Switzerland would be respected. There can be no doubt that the operations between France and Italy will have only a secondary importance, and on both sides there would result merely a state of expectation as to what was happening on the principal theatres of war.

The first question which presents itself is, Who will attack? And the reply must be that at the beginning of the war neither France nor Russia can take the offensive by invading Germany: France, by reason of her political and social organisation; Russia owing to her great distances. But there are other reasons more important why neither France nor Russia can think of invading Germany.

Invincible while on the defensive, and, therefore, sure that their adversaries would in the end be forced to demand peace, on the offensive they would exhaust themselves without having the slightest chance of imposing their will on Germany. The principal object of all wars in the past was the destruction of the enemy's army by striking against it some decisive blow. But even by cases taken from these past wars I pointed out in my work "The War of the Future" that it is impossible nowadays to obtain such result by taking the offensive.

Since 1870 France has done everything to prepare herself for the defensive, and Russia since 1880, and they will not suddenly abandon this attitude for the adventure of an attack, believing that Germany would soon be obliged to cease the war for social and economic reasons.

General von der Goltz himself said "France is so well prepared for a war, the frontier regions are so strongly fortified, that we should not recognise our ancient enemies of 1870." The operations between France and Germany are likely to be so prolonged that on looking at a map it will be impossible to discern their progress; and Russia by reason of her immense extent, and relative lack of communications, presents enormous difficulties for the attack. A war with Russia in no case could end with one campaign; several would be necessary to arrive at any result.

Now such being the case, Germany would be obliged to demand peace owing to influences destructive to the social and economic order, which would operate in case of an offensive war with an intensity infinitely greater than in France acting on the defensive.

Having established primarily this fact that France will rest on the defensive, I will give some statistics for a plan of operation. Basing my work on the calculations of General Brialmont, I estimate that the forces put into the field by the two adversaries will be about 2,128,000 French against 2,035,000 Germans. In estimating the question of loss, fearing to be accused of exaggeration, I have computed the losses of the attacker as only 20 per cent. of his effective. Having made the deductions, and the other necessary deductions from disease and desertion, it appears that the French army standing on the defensive would still dispose of 1,160,000 men to defend Paris, whereas the Germans would have only 520,000 men left to proceed to the siege.

Count Caprivi, who was familiar with all these questions, expressed himself as follows when speaking in Parliament on the subject of the new military law: -"If the French army is beaten and takes refuge in its fortresses, we should need to invest Paris completely 18 army corps (nearly 900,000 men), without counting the reserve. It is probable that the investment would take place only on one front, and in that case the siege might last a whole year, as did the siege of Sevastopol." In the Austro-German-Russian theatre of war a great number of combinations might be formed, but an examination of them all would lead to the same conclusion, that in presence of the technical conditions of a future war no decisive result will be attained.

For reasons like these decisive war between the Triple and Dual Alliances indeed seems to me an Utopia, and the application of the lessons of the South African War to a Franco-German War proves that what was yesterday only a probability has become an impossibility, as the forces put into the field by the two adversaries will be almost equal, that is, 2,128,000 French against 2,035,000 Germans.

The outbreak of operations has generally in the past been preceded by a declaration of war. It is very doubtful whether in the future we shall have such a declaration. But the South African War teaches us that it is a mistake to believe that nowadays the effecting of the most rapid mobilisation will play a decisive rôle. To oppose the enemy the inferior numbers of attacked troops will throw up entrenchments at the moment of mobilisation. And the most notable thing about the South African War - as Sir Howard Vincent told you in his lecture delivered here a year ago-is the speed with which entrenchments may be made. In the evening we see an entirely bare hill, and by morning we find three lines of trenches preventing all approach. There can be no doubt that skilled European troops will be more capable at such work than the Boers. The first lesson of the Transvaal War is, that with modern arms a position can be defended by a very thin line of riflemen.

My belief is that France being able to repulse all German attacks, and not wishing to risk an attack herself, will abandon the idea of invading Germany, and will not even make counter-attacks.

If I were to develop more fully this part of my lecture, I should say that all that is applicable to the defence of France is applicable to England, who, acting in the same way, could guarantee herself against possible invasion by means of territorial troops

with an insignificant reserve of regulars. The preliminaries of a French resistance on such lines are simple.

The French positions would be strengthened by field fortifications. The time of peace has been utilised to prepare plans of works, entrenchments, batteries, wire entanglements; and there will be, collected in the immediate neighbourhood sufficient trenching tools and other necessaries. On the declaration of War, the civil population of the frontier region might be formed into groups like the Boers, and be charged with the construction of works under the direction of engineers, and under the protection of the frontier garrison. Even if the Germans succeeded in piercing this line at any point by accident they would only come across a second line as strong as the first, before this they would find themselves in danger of having their flanks turned. It is, of course, not enough to construct defences: it is necessary also to man them. France possesses forces of more than 4,500,000 men who have undergone military training, and, in view of the lessons of South Africa, she might for the defence of her entrenchments and fortifications appeal to the frontier forces and the population of the limitrophe provinces. These contingents would be ready before the German mobilisation, however rapid it might be. They would need only a simple uniform, such as khâki, and sufficient rifles and ammunition.

Behind the lines of defences defended by territorials the mobilisation of the Active Army would proceed as now arranged. As the French army will rest upon the defensive, it has no need to receive its reservists before being transported to the frontier. It will receive them as easily on the land which it defends, and thus the first part of the concentration will be much simplified.

The South African War has proved perfectly the argument as to the power of thin lines armed with modern weapons. Very thin lines of the Boer defence with an inferior total, with training infinitely inferior to that of the French, and without organisation, succeeded in repulsing the British. At Waterloo, Wellington has some 35,000 men on each mile of ground. At Magersfontein, the Boers with some 6,000 men defended 20 miles of front. That is to say, they found 300 men per mile sufficient to hold their lines against the British attack. Their defences were 100 times thinner than the Waterloo lines. It is impossible to attribute this to any exceptional courage on the part of the Boers. The French have often proved no lack of courage; they will have 6,000 men per mile, not 300. But the guns of the defenders when turned, as at Spion Kop, on exposed men in close formation were very deadly.

And what is still more important is that the French land is on the whole more propitious for defence than South Africa is in general. The French country in this respect is highly favourable for defence, as may easily be seen from the profiles of the roads from the German frontier to Paris.

In discussions with soldiers I have always met with the objection that the Germans would employ such masses of men that the lessons of the Transvaal War would have no importance. Many men, they say, would be lost, but the defenders' lines would be

broken all the same. It is necessary to observe that the military authorities whom I have already cited declare that the greater the masses the greater will be the defeat. The German troops must be so dispersed to such immense distances that the same phenomena will be witnessed as in South Africa. The military routinists deny this necessity, but it exists. Three British generals who have followed the events of the present war have occupied themselves with it. General Webber is one. General Maurice has treated the subject in the same way as your Institution when he said: -"Wellington at Waterloo had 69,000 men on 2 miles of ground. During the 1870 campaign somewhere about 5,000 men were quite ample to hold any mile of ground. Obviously, if that proportion is carried on as the weapons improve in rate, range, and severity of fire, a very much smaller body of men will be able, with our modern weapons, to resist a frontal attack. It was the deduction we all made on previous experience, that that would be the case, that a frontal attack against men armed with the weapons of to-day is, as Bloch has worked out in his book in a most exhaustive manner, one of the most difficult of attempts."

And Lord Roberts, as I have already pointed out, declared that he had increased the space between the files to 20 paces.

The Austrian regulations for attack assign to a regiment 800 to 1,000 paces. Thus on a space in which Lord Roberts thought he could put 166 men, and afterwards found it possible to put only 50 men, we see a whole regiment put. But who can doubt that Lord Roberts was right? But if against the thinly-manned Boer trenches such dispersion was necessary, how can a European army attack in such close formation the thicker-manned trenches of a European defender?

But is the massing of an army corps on a space of 5 kilometres possible? Supposing an affirmative reply; where will an open battle-field be found large enough for armies consisting of 10 or 20 army corps? Wherever the attacker might find such a field we do not know, for thirty years' work has been going on to prevent it. But the solution of all these problems is that even in Germany itself soldiers recognise that it is quite impossible to mass troops according to the regulations. Authorities even declare that the troops must be so dispersed that General Schlichting even went so far as to say that the headquarters staff of the German armies in any future war, on either frontier, had best remain in Berlin.

But there is still another argument employed by professional soldiers, who treat the subject superficially, and from the point of view of routine.

If direct attack is impossible, the attacker, we are told, will employ turning movements, such as were employed by the Germans in 1870, and by Lord Roberts in South Africa. But the first condition of such operations is a numerical superiority which the Germans will not possess; and the second condition is exposed flanks, and we know that natural obstacles and extensive fortifications protect all the French lines of defence.

A French attack upon Germany would meet with the same results, even supposing that France, owing to any accidental conditions, should mobilise more rapidly. And all that is applicable to the Franco-German frontier is more or less applicable to the Russo-German, Austro-Russian, and Franco-Italian frontiers: no side would even at first have a great advantage in numbers, and in a few days the combatants would be equal in number and armament.

GUERRILLA WARFARE AND THE LESSON OF SOUTH AFRICA.

But in war we must always count with the unforeseen, however improbable; and though I believe that it is unlikely that a German attack upon France would succeed, still it is worth while considering that eventuality; and supposing that France does not recover from her first defeats, what would happen then? The first thing to note is that the spirit of nationality is much stronger to-day than it ever was, and no nation will submit to national annihilation without first exhausting every means of defence. Therefore we must consider the contingency of the struggle continuing long after the first opposition was defeated. But guerilla warfare under modern conditions would not be without order and method, but on the contrary would be scientific, with magazine rifles and smokeless powder, and would take place under conditions yet unknown.

Taking as objective the railways, which are so much more vulnerable than ordinary roads, the French guerillas would probably destroy the Germans. It will be replied of course that the French civil population is very different in character from the Boers. Now this is no doubt true; but, on the other hand, every Frenchman has undergone military training; and whereas the British Army in South Africa outnumbered the whole civilian population, men, women, and children, the German armies would be confronted with a civilian population numbering millions. The fact that the French franc-tireurs effected so little against the Germans in 1871 proves nothing.

The contention which I urged long before the South African War was that the modern rifle, favouring individual action and sharpshooting, and requiring the abandonment of close formations, was primarily a guerilla weapon and tended to put the civilian on a level with the regular. The Transvaal War, especially in its later stages, has abundantly confirmed this prediction, and we see now civilians in inferior numbers actually attacking regulars and gaining successes.

Is it not certain that if the French were able to carry out an invasion of Germany they would meet with similar difficulties. A guerilla war would inevitably follow the regular resistance in the future.

The question then arises, whether there is really any need for the training of men as it is practised nowadays. It seems to me that the answer is in the negative, and the South African War is the best proof of this. But since England is on the point of re-organising her Army, we must examine in still greater detail this question, considering it from the point of view of the part which England might take in a Continental war.

THE BRITISH ARMY AND THE LESSON OF SOUTH AFRICA.

Just as Plevna was a revelation from the point of view of the use of entrenchments, the South African War has been a revelation from another point of view, showing not only the superiority of the defensive, but also the enormous increment of strength given to a civil population's resisting power by smokeless powder and the modern rifle.

This revelation as to the consequences of a national war has an immense importance. It shows how invincible is a nation defending its independence. In a war between Great Powers, as I have attempted to prove, there is no prospect either of great victories or of definite gains by means of arms. We shall see only a reciprocal using up of forces. But this wear will be infinitely greater among the attackers than among the defenders; and thus from the economic as well as the military point of view the defender is infinitely stronger. Soldiers themselves tell us that the basis of the armed force of a country is no longer the army, but the economic resources, and everything which weakens these resources weakens the base upon which the army rests. But the deduction from a fact which they admit is ignored to an extraordinary extent by soldiers themselves. For at present the productive economic forces of nations are enfeebled and milliards spent in order to give to armies a training which no longer corresponds to the conditions of war.

It seems to me that the manœuvre formations which are still taught are no longer applicable to real battle. Formerly there was every reason for making the soldier first of all an automaton, which by force of exercise had to perform mechanically the various evolutions on the word of command, unconscious of everything except that he did what his comrades were doing. Thus, in drill as at war, powerful masses moved by the inertia of their own obedience. These masses were deprived of all individuality, and became veritable mechanical automata, obeying the voice of their commander like animals. To obtain this result innumerable regulations are elaborated. But they have not progressed commensurately with the technical improvements in arms. The soldier is still a machine, and the South African War has proved that the transformation of the soldier into a machine, moving at the single command of its chief, is now useless and even injurious. For movements in close formation are now carried out only at a distance from the enemy, and during march. With the enemy in sight, close formations are not admissible, for they would result in losses which no army could sustain. Lord Roberts from his own experience recognised this. Therefore the power which the mass formerly exercised upon the individual has disappeared. The habits acquired during training are no longer applicable, and their place has been taken by the individual qualities of the soldier. The barrack manikin has been of late shown to be inferior to the simple practical man who brings to the main idea - the location of the invisible enemy and his defeat - all his energy and intelligence.

The military service of to-day disorganises the family, and is a cause of enfeeblement for nations in the struggle for existence, by taking away several of the best years of men's lives. And with what object? To obtain victories in imaginary battles fought in the old method, which will never take place.

Even in the question of fire instruction we do not find any especial advantage in the present system of training. *In actual battle* the difference between picked marksmen and very ordinary marksmen seems to be almost nil. Emotion and fatigue have the effect of levelling all down, and all experience shows that it is the great number of shots fired during the short time in which the enemy is visible which produces the result. The modern rifle can fire as many shots as twenty-five a minute, and in a modern European war the defenders will be much better supplied with cartridges than, for instance, the defenders of Plevna, who belonged to a resourceless State like Turkey. Yet at Plevna some attacking regiments lost 60 per cent.

It is difficult, indeed, to see any advantage in compulsory service. Suppose that compulsory military service had been adopted in England, and that 300,000 Reserves had been sent to South Africa, you would not have had better men; and as things are now you have had the advantage that amongst those you have sent there are no heads of families, no merchants, no labourers—the indispensable levers of social activity. Public credit has rested intact; but if you had sent to South Africa the mainsprings of English social life, what perturbations there would have been! And, indeed, of what is the boasted German Army instruction composed? First of all, marching on the drill ground with the legs stretched out, the body held stiffly, strictly observed manual exercise, which regards it as a *sine quâ non* that all the rifle barrels slope evenly on the shoulder, while every disengaged hand in the company or battalion swings in time. It would be interesting to know what value all this would have been to your armies in South Africa.

Of course, the first of all questions which is concerned in that of British military service is, What is the purpose for which the British Army is intended? Is it to take part in a Continental war? But with France and Germany's two millions of men and with Russia's four or five millions, what rôle could England play with an army of four, five, or even ten army corps?

Is it for defence against an invasion that England wishes to create the Army projected in the present scheme? But England has already means of defence so effective that there can be no thought of invasion. It is the British fleet which is the best guarantee. Is it then for Colonial purposes this great Army is required? If so, the German system is still unsuitable, and involves only social perturbations such as I have described. In Germany the Army is organised largely from the point of view of the propertied and governing classes. "You must kill your fathers and mothers if necessary. You have taken the oath," says the German Emperor. There is no need for such an Army in England, because at present there is no obligatory service in England, and the social discontent which makes conscription necessary does not exist.

What England has really to fear is the interruption of maritime communications in time of war. I have already pointed out the immense importance which economic resources will play in the future war. The interruption of maritime communications would be very grave even for France. As to Germany, Admiral Werner estimated that in case of war with Russia she would have to demand peace after a few weeks if the struggle were to begin at the period of the year when the stores of grain reach their depletion; or after a few

months if the enemy's ships were able to prevent the transport of oversea grain. At present the Powers prepare to do all they can to paralyse the trade of a possible enemy, and carry on privateer war without mercy. The best evidence of this is the subsidies played for merchant-ships which can be turned if needed into commerce-destroyers.

The employment of war-ships to convoy merchant-vessels presents enormous difficulties, and would not prevent insurance rates rising so high as to affect the price of food. The protection of the commercial routes by squadrons at strategical points is impracticable, owing to the enormous number of ships required. England, it has been estimated, would require 556 cruisers for this purpose. Some British admirals have been of opinion that the British fleet would be unable to protect its merchant-ships in time of war. But even if a high degree of protection could be ensured, the price of products of the first necessity must rise to enormous heights so that they would be beyond the reach of the mass of the population. At her own manœuvres England herself has proved that a well-handled fleet of swift cruisers could bring her to the edge of ruin without risking a battle.

The statistics of production and consumption show that the deficit of wheat increases every year. In later years it appears that England imports wheat for 323 days of the year, barley for 263 days, oats for 40 days, and enormous quantities of other foods. In this respect we see a terrifying progress towards need.

England is indeed then greatly interested in the maintenance of peace from this point of view alone. And we must not forget that we live in an epoch of which the essential motto is "Envy." This envy is turned towards the British Colonial possessions. The Colonial mania has touched spheres which ought to be beyond such a danger. But England on her side does not covet the Colonies now possessed by other nations, and therefore she has nothing to gain and much to lose by war. I must repeat, then, what I wrote a year ago in the French *Revue des Revues* in an article on the Transvaal War and its Problems: -"England must return to the glorious liberal traditions of the past which made her great, otherwise she will be in the position of staking her existence for the sake of a chimera."

CONCLUSION.

In my lectures I have attempted to study the lessons of the South African War from the point of view of a great European struggle. I have pointed out everything that is possible will be done on the Continent in order to hide the truth and distort it. The best evidence of this is the Hague Conference. In spite of the affirmation of soldiers, among them men of great intellect, who had taken note of all the changes which have come about in the military art, men who had the great merit of revealing their convictions as to the probable duration and effects of a future war; in spite also of the high authority some of these men enjoy from their positions, yet their predictions as to what would happen, which the South African War has so thoroughly confirmed, produced no effect. The discussion did not even touch any essential point.

It was because these declarations had been neglected that the proposal of the Russian Emperor made to the Hague Conference that peace should not depend upon a single will alone, but upon an arbitral tribunal, had no success. But to-day, after the revelations of the South African War, we see how generous and just was the initiative taken by the Sovereign of a Power which alone represents two-fifths of the total forces of Europe. The object of the Hague Conference not having been attained, it is, unfortunately, to be feared that a war may break out in Europe. National hatred and envy are stronger than ever. For England the danger which results from this situation is all the greater, because in order to justify the immense expenditure which is made on fleets, one puts forward the pretext of the defence of commercial interests, which it is pretended are menaced by England. But neither reform of the Army nor increase of the Fleet will diminish the danger.

In conclusion, I will add only a few words for the pessimists who think that the present state cannot be changed. If the conviction was established that all hope of profitable invasion which would satisfy covetousness -the cause of war-had become illusory, the words of the Tsar's rescript that "the competition in armaments is unjust and absurd" would receive a brilliant confirmation.

Formerly there were no means of constraint but force; to-day if there existed an arbitral tribunal whose judgments could be carried out by excluding a recalcitrant from the benefit of the international conventions, war would become impossible. That is the reason why armaments form a crime against humanity. The greatest service, therefore, that can be rendered to humanity is to study profoundly the new conditions of war and the results to be hoped therefrom. When all are convinced of the impossibility of deciding international quarrels by means of war, disarmament will be imposed gradually by the force of things. And then when the greater number of those millions of men who now for years are engaged only in sterile military exercises; when a great part of the hundreds of millions spent to-day for keeping them are devoted to aiding the misery of the people; when there is no more need of Colonial conquests or of Protectionist economics, England will profit from the new state of things more than any other country, and a grateful humanity will bless those who have contributed to this result.

Colonel C. M. H. DOWNING, C.M.G., R.A.: -I have very little to say, except that from my experience of South Africa, I consider that the artillery in the attack still have the same *rôle* to play as ever, namely, to support the infantry attack; and the only way to do that is by keeping down the fire of the defenders, though without necessarily inflicting actual loss thereby. That has been shown on several occasions, especially, I think, at Pieters Hill. There I had no personal experience myself, but I can easily imagine from the experience *I have* gained that there is no difficulty whatever in artillery, properly used, keeping down the rifle fire of the defence. If the rifle fire of the defence is kept down, the infantry attack can be pressed home and should succeed. In support of this, I may mention only two cases which came under my personal observation. One was where three batteries¹ came into action at 2,400 yards against the enemy's main position. In a very short time they overcame the four guns of the enemy, and these did not fire again that day. After that, although, we never saw a single rifleman anywhere, we kept down the enemy's rifle fire by very slow artillery fire at the whole line of the position. Whenever the enemy's rifle fire broke out again we simply opened slow fire with our guns, and the rifle fire died away at once. In my opinion, riflemen will not stand up against artillery shrapnel fire with anything like steadiness if the artillery are cool. On another occasion I had a personal opportunity of observing two guns assisting the withdrawal of a squadron of our cavalry after a sortie from Ladysmith. The squadron got involved in a bit

of very hilly country, and although we never saw a single Boer, there was a very heavy rifle fire. We all thought the cavalry must be annihilated. From where I was I saw the whole of the movements of the cavalry, but we never saw the men that were firing at them. There were two guns in position under cover, covering the retirement, which fired under the instruction of the officer (who was by me at the time) in command, at whatever he thought the enemy's riflemen might be, and they at once put down the rifle fire. This is all I want to point out. I think I may add as regards our artillery that whatever improvement is going to be made in our *matériel* in the near future, it is in the right direction, and is only what we expected would have to be made before the war broke out.

¹Two 15-pounder batteries and one 7-pounder battery. - C.M.H.D.

Admiral Sir N. BOWDEN-SMITH, K.C.B.:— On Monday last, when the Chairman introduced the lecturer to our notice, he said that M. de Bloch would not read the paper himself because he did not feel quite at home in the pronunciation of the English language. I am sure you will all agree with me that as far as the wording of the paper is concerned it needs no apology, for it is written in excellent English. This paper presents to us an extension of his views as expressed in that most interesting book of his, "Is War Impossible?" It enlarges on these views, and after considering his paper and reading a pamphlet of his which was left on the seats last Monday, I understand he comes to the conclusion that it is very difficult for any war to be successful; and that, as regards this war in South Africa, the English will not be able to attain their object. I was much surprised to notice in the early part of his paper that he makes light of our long line of communications. He says they play no important rôle in the campaign in South Africa, whereas, I understand that our generals are very much hampered by the long line of communications, all more or less in a hostile country. They have to leave such an immense number of their men to guard these communications that the situation becomes very difficult. The author alludes to the great changes in warfare brought about by long-range guns and rifles and smokeless powder, and points out how difficult it is now to scout with any advantage or to make any successful reconnaissance. But there are two advantages the Boers enjoyed which he does not notice in his paper; he does not speak of the great mobility possessed by the Boers, of their being able to be here to-day and 50 or 60 miles off to-morrow. He also says nothing about the Boers fighting out of uniform, which has been a great disadvantage to us. Usually during warfare in a civilised country, if people out of uniform interfere with an invading army, or attack them, they would, if captured, be liable to be treated as bandits and strung up to the nearest tree. Although the Boers had no uniform we have conceded them the rights of war, and whenever we have taken any of them prisoners we have given them the full advantage of prisoners of war; whereas fighting out of uniform has enabled a Boer to pose as a harmless peasant one day, while the next he would take his rifle down from its hiding place and snipe at any column which happened to pass within range of his murderous weapon. M. de Bloch refers to the numerous Volunteers and civilians who have gone out from this country and from the Colonies to take part in the war, and he speaks of the great courage and splendid behaviour of these men. We thank him for this expression of opinion, and we are all proud of our countrymen, from the noble duke to the man in the street, who have gone out to fight for England; but I cannot agree with him in thinking that because this has been successful in the present case, Regular Armies and trained soldiers are no longer necessary. We must not too hastily assume that we can altogether do away with trained men and Regular Armies. Possibly if we had not had the organisation of a trained Army in South Africa, these numerous Volunteers, splendid fellows as they are, would not have been able to accomplish the good work which they did. The lecturer alludes to the hostile feeling shown against us generally by Continental nations. To a certain extent he excuses it by saying that after all some people's feelings come more from their hearts than from their heads; but we know that this feeling exists. We are sorry for it, and cannot understand why it should be so. The reason possibly is because they think the war is an unjust one. I should like however to point out to M. de Bloch that never in the history of Great Britain have our people been so united in a cause as they have been over this war in South Africa, and when we consider Greater Britain, with the exception of parts of Cape Colony, there is not a single one of our possessions or Colonies which has not come forward loyally to the support of the mother country and helped us in every possible way. They certainly would not have acted thus had they thought the war an unjust one. We are very much indebted to M. de Bloch for coming here and giving us this

paper. I am sure the Institution likes to hear opinions from any gentleman on the arts of war, especially from one who has studied the question so carefully as M. de Bloch has done; but although we very much value his suggestions and opinions, be must excuse me if I say that I do not altogether agree with them. In the latter part of his paper he tells us that England must return to her old liberal traditions. I say we have never left them. If he knew England and the English better, he would know that we are a most peace-loving nation. It is a very difficult thing to move the English people to war. If we had been lovers, of war, we should have gone to war with the Boers long ago; we did not go to war with them until we were compelled to do so, nor until the South African Republics invaded our territory and sent us an impossible ultimatum. Then there was no other course to pursue; and though we admire the courage and endurance of the Boers, though we fully admire also the patriotism that they had shown in defending their country, I think that true patriotism does not require them to continue this struggle until their country is exhausted and their race partially annihilated. The truest and kindest friends of the Boers are those who will now try to point out to them that England, having once put her hand to the plough, will never look back until she has asserted her supremacy in South Africa.

Colonel F. J. GRAVES (late commanding 83rd Regimental District):-You have heard the remarks of a Volunteer,¹ a Member of Parliament, an old friend of mine, and a distinguished admiral. You will now unfortunately be reduced to the rank of a cavalry soldier. His Excellency has, if I may say so - I do not think he will understand the English idiom - simply wiped the floor with us cavalry. His Excellency has paid high and heart-felt compliments in the tribute to the bravery of our British

¹Colonel Sir Howard Vincent, KC.M.G., C.B., M.P. Owing to a blunder on the part of the shorthand reporter and the absence of Sir Howard Vincent in South Africa, it has unfortunately been impossible to reproduce his remarks. -ED.

officers and soldiers in the Transvaal, and, as coming from a Russian, I am perfectly sure I only express the feeling of the whole audience in saying they are deeply grateful for the way in which he has expressed himself. The paper is most interesting. The books upon which this paper is based are more interesting still, because fuller, and I think they deserve the close attention of all ranks of our Service. But when we come to the paper of to-day I take leave very humbly to differ very seriously on certain points put forward in it. While I do so, I do not mean to say that I differ with the inner mind of M. de Bloch. The whole trend of this double paper put before us seems to me to be based upon pure and simple ballistics. It takes little or no account of the conditions on the Boer side with regard to the country and so on, and the conditions on the British side. It is based purely and simply on the value of long-range firing, flat trajectory, and the effect of modern artillery and rifle fire as it at present obtains. Now I consider that the lessons to be learnt from the South African War include not only that, but something much further. They include not only the material, but also the qualifications and idiosyncrasies of the *personnel*. May I venture to take up two or three moments of your time by putting this in a short antithesis or juxtaposition? First of the Boer was in his own country, with a complete knowledge of the country, a marvellous knowledge of that country, with information anywhere he chose to halt for the night's rest. The farms were depôts of supply, of horses, food, ammunition, etc., and information as well. The British go into a strange country: they have few maps, and most of those very unreliable. They have unreliable information. Supplies had to be carried because the local supplies were uncertain. So much for the conditions; I cannot labour them out. The Boers were mobile, so much so that a small force all being mounted could turn every flank attack we attempted into a frontal attack. The British, on the other hand, for the greater part of the last 18 months were absolutely non-mobile. It is a case of the hare against the tortoise. With regard to the personal idiosyncrasies of the Boer as compared with the British, I do not want to do them any injustice, but I take it that the Boer fights personally to prevent his foe getting at him. The Britisher, I am proud to believe, fights with the view of getting at his foe. The Boer from the time he is 12 years of age is a born stalker. He gets up behind a small rock near the watering place of an antelope, he lies down there, smokes his pipe, lays his rifle, waits till the animal comes along and then shoots. That is just exactly what he has done with regard to the British soldier. The Boer, therefore, in 99 cases out of 100 fights prone on his face, it is part of his job, it is what he has been taught to do; but the Britisher fights, I am sorry to say, mostly straight upright. Therefore, owing to that one difference between the two classes

of men, we find greater losses on the part of the British troops. So much for the differentiation between the two classes of people. You have put down in the first part of your paper that the first lesson derived from the Boer war is invisibility. I agree with that. But invisibility, to my mind as a cavalry soldier, only beats mobility (if you understand my metaphor) by a very short head. I think one of the chief lessons to be learnt from this South African War is the great value of mobility. I do not err in that; if I do err at all, I err in very good company. Many of you will remember Sir George Chesney's noted lecture here in the year 1874, when he out-Heroded Herod in support of the value of mounted troops. He says: - "Imagine now what would be the effect of 30,000 or 40,000 horsemen- horsemen fit to act together or fit to act alone - men able to ride across country, across any country in Europe, riding to and fro in rear of an army intercepting its communications, cutting off its supplies, destroying its reserve ammunition and material, creating confusion and panic far and wide. Is it not clear that the larger the enemy's army the greater would be its resulting confusion and disorganisation? Such a mode of attack carried out boldly and without fear of consequences or regard to conventional rule would, I believe, utterly cripple and confound an opposition army of vastly larger size. Thirty thousand men in this way might hold in check 300,000." I rather agree with that, but there are some here who may say: "That is all a matter of theory. Have we ever had anything in military: history put into practical effect on those lines?" I say we have, and I am prepared to show from one single fact of military history that had those lines been acted upon at the outset of the South African War, very likely peace would have been declared six months ago. I hold in my hand a translation of a Russian pamphlet by B. T. Lebedev, on the invasion of India, in which the author refers to an incident of some importance, which occurred in the year 1801. That was a lucky year; we are now in 1901 which is just, a hundred years afterwards. M. Lebedev says: - "In the year 1801, the Emperor Paul of Russia made an attempt to carry out a certain plan of campaign by himself. He proposed to attack and seize India. What did he do? He detailed 22,500 Don Cossacks for the purpose." In autograph letters to the Ataman of the Don. Cossack troops, General Oilor, the Emperor Paul wrote: - "I trust the whole of this expedition to you, and your troops of cavalry; get them together," and so on. Now mark this point. "The troops of the enemy are similar to yours." Let me just give you a little corollary from the second letter he wrote. He put at the end of that second letter: - "If infantry are required, I will send them after you; but it will be better if you can manage with the force at your disposal." I may be heterodox, I may be an utter radical in this matter, but I believe that if instead of having now 70,000 mounted troops in the field against the Boers at this late period of the fight, we had begun with 70,000, the result would have been of a very different character. I say, therefore, that when M. de Bloch declares that cavalry are no good, to take his own words, "for irruptions, for reconnaissances, for making incursions into the enemy's country, for attacks of cavalry *en masse* against cavalry, cavalry charges, meetings of cavalry with cavalry, and so on, or pursuit of a flying enemy," I say there is nothing in the South African War, which has been conducted under exceptional circumstances, which proves his case. I believe that while the action of cavalry in the future may be, and necessarily will be, modified, that they will have a great future before them. I believe that if to-morrow we had twice the number of cavalry out at the front -mark you, well-horsed and not over-weighted-I believe the war would be over in the snuff of a candle. Let me give you one little instance of the action of cavalry in an attack, that came to my personal knowledge from one of the men that I was fortunate enough to select to go out with some of my Imperial Irish Yeomanry. At a place called Koonat, Captain Moore, of the 60th Company of Ulster Yeomanry, had a squadron under his command. He was going out as the flank defence of a large convoy. A commando of Boers about 300 in number was located on a kopje at, this place Koonat. What did he do? From a cavalry point of view, I think he did quite the right thing. He happened to know the country well, for he had been over it several times, so that he had that advantage. He opened out his men, twenty yards from knee to knee, they took up all four reins; they sat down and they rode like demons. They swept over the kopje, took a number of the Boers prisoners and the whole of their wagons, and only lost one man wounded and one horse killed. After all, we must remember that cavalry is an arm of opportunity, and when these opportunities are grasped and taken hold of and used in the right way, I say that the sunset of cavalry has not come yet, but that it is in its full noonday. Also the lecturer has been bold enough and courageous enough to hold turning movements in contempt. I should like to know whether a single turning movement was brought into effect in South Africa except by the aid of mounted troops. I believe that such will be the case in any great Continental war. The forces will be so great opposing each other, that it will require turning movements of mobile troops to bring any overpowering force upon any particular point of attack which may be required to be made. Just one word more. The lecturer has drawn our attention to a subject which is seldom discussed or thought of within these walls. Let me very humbly, as a learner myself, commend to the general attention the

excellent paper of Captain Murray on the subject of food supply. I believe, with His Excellency M. de Bloch, that in case of even a threat of invasion of these shores following on that of any prolonged tension owing to that threat or owing to preparations based upon that threat, I believe that a greater foe to our Empire will exist in the price, the accelerated and exorbitant price of the four-pound loaf, than the enemy who is likely to land upon our shores; based upon that I believe there is a second enemy with which we shall have to deal even before the Frenchman or the German sets foot upon our shores, and that is the undisciplined, the unruly, and the hungry mobs of unemployed from our great centres of industry.¹

¹I venture to take grave exception to the manner in which M. Jean de Bloch completely misrepresented my views and remarks in his concluding reply. Colonel Lonsdale Hale clearly and forcibly expressed what I meant to convey, - F. G.

Captain Sir JOHN COLOMB, K.C.M.G., M.P. (late R.M.A.): - My chief object in wishing to say just a few words is to express what I am sure everybody feels - the gratitude we owe to the distinguished lecturer for coming here and giving us a lecture full of information, which only a man of his great research and knowledge could possibly give us. But I also am compelled to occupy your time for a moment or two to enter a humble protest against two assertions that the distinguished lecturer makes in the very opening part of his paper, which arise, I think, from a misapprehension of the position of this country. He announces dogmatically that this country - that is, England - is on the eve of radical reforms in the reconstruction of her Army, and a little lower down he speaks of the projected increase of the British Army, with the object of participating in the struggle with Continental Powers. Now I think that ought not to pass unnoticed. In the first place, we are not on the eve of a radical reconstruction of our Army at all. That is an undoubted fact to anyone who pays the slightest attention to naval and military matters in the House of Commons. In the second place, if he looks into the very small things we are doing, he will see we are simply regrouping, for the purposes of administrative convenience, the forces as they exist. We have added nothing to the effective and striking force of our Army at all, excepting, indeed, we have created some battalions of veterans to sit down and wait behind fortifications till somebody comes and attacks them. The rest of our augmentation is simply an augmentation for the purpose of resisting a foreign Army after it has comfortably landed on these shores. We have increased the Yeomanry and given it a new name, and we have proposed to add 50,000 men to the Militia - I say we have only proposed to do it; we have yet to see whether we get the men. I ask the distinguished lecturer to remember that that is all we are doing and all we have done, and, as far as I can see, all we propose to do. There is no symptom of increasing our power of aggression in that. Therefore, Sir, as a public man, I felt it my duty, at all events, to rise to point out to the distinguished lecturer that those assertions are founded upon erroneous information, which has blown this Army reform frog up into a bull. There is one other point that I should like to make. Of course the whole lecture proceeds in the direction of what the author considers a final conclusion, that is, that war is impossible. Well, Sir, that has been said before. I can see nothing in history to justify any conclusion of the sort. Take the history of the last century. It commenced in war; then there was a long period of peace. At the middle point of the century, in 1851, all the nations of the world were collected in the Crystal Palace at the opening of the Great International Exhibition. That was taken by everybody to mean the beginning of an era of universal peace. Officially we offered up prayers to the Almighty through the Archbishop of Canterbury, and thanksgivings that nations would learn war no more. What is the fact? If you take the statistics of the period of the century before that thanksgiving, and the statistics of the remainder of the century after it, I think you will find there was more bloodshed and greater cost incurred in prosecuting wars in the last half than in the first half of the century. Therefore, I think myself, as far as history goes, that it tells against the lecturer. But, Sir, in making deductions from the South African War, and applying them to the case of Continental wars, with all humility I venture to say that I think the lecturer has not paid quite sufficient regard to one broad aspect of the question, it appears to me that he has not considered sufficiently - at all events, it is not shown on the paper - the influence in operations of war, of area in relation to the force employed. Therefore, I refuse to accept deductions made from the war in South Africa, except in matters of minor tactics, and I venture to say they are inconclusive as regards what may happen in Europe. Just let me illustrate very shortly what I

mean. The distinguished lecturer, in following out this plan, pictures a war between Germany and France. Now the possible theatre of war in that case is very limited as compared to South Africa. But, on the one hand, that would be a theatre of war with two nations with millions of men, and, on the other hand, in South Africa it has been a war in a vast area with a comparatively small force employed. I suppose that 350,000 or 400,000 is the greatest maximum number of men that ever was under arms on both sides in South Africa at any time during the whole of the war.

A MEMBER: -A great deal less.

Sir JOHN COLOMB: -I prefer, in putting my case, not to overstate; that is the position. Our difficulties in South Africa have been analogous to the commonplace difficulty of finding needles in a bundle of hay. But that cannot arise in the case of an European war. Just let us look at what has happened since the close of the Franco-German War. There has been an immense increase of armed force on both sides, while the frontier remains in extent just the same. What this war in South Africa has taught us, I think, is that the force that can actually be placed in the fighting line in the field on that narrow area is limited by the advance of modern science and the effect of fire. Therefore, to my mind, the question is, not is war impossible, but will it not happen that in Europe, under the conditions of Europe, that it will be carried on in a totally different manner from what it has been hitherto? The question is not only affected by geography, but by population. In Germany or France, the supposed theatre of war, the population is something like two hundred persons to the square mile, but in the theatre of war in South Africa it was less than two persons to the square mile-that in itself must have an appreciable effect on the arrangements necessary, and the mode of operations in South Africa, as compared with Europe. I have already detained you rather long, but there is one other point I should like to make. I think it must be agreed that the day has for ever gone when groups or masses of men can be exposed in the open to the fire of an enemy concealed. That, I think, is absolutely beyond dispute. As our distinguished lecturer refers to invasion, I should like to ask him on a future occasion, at all events, just to press that fact a little further with regard to the question of our invasion. Surely, if you cannot make a frontal attack on land, taking every opportunity of individual shelter that land offers; if you cannot do that, how on earth can an attempt be made to land a great invading army conveniently grouped and exposed on boats and on rafts on the fair open smooth surface of the sea, under the fire of a very few men and a very few guns to oppose them? Why, Sir, it is practically and absolutely impossible. You cannot attempt it. I hope the distinguished lecturer will bring that home to the mind of England, because I think it requires to be brought home. Before I sit down, there is one other remark I wish to make, namely, that I absolutely and entirely agree with the lecturer that the real danger of England and of the British possessions lies on the sea. It is the economic question of commerce and the protection of commerce in war. Having occupied your time so long, I cannot give my reasons why I differ from him in thinking that the attempt to protect our commerce adequately is hopeless. I think he does not, if he will permit me to say so, sufficiently allow for that great factor in maritime war which is the moral effect produced by a superior force. It is not that we are going to directly protect every merchant-ship, or station ships all over the ocean for the purpose of directly protecting our commerce-that is not the question. The real question for us is the possession of sufficient battle-ships, cruisers, and observer forces, constituting such superior power as to produce the moral effect that keeps the enemy in port. That must be our policy. And while I admit the greatest danger England has to face in the problem of war is the protection of her commerce at sea, I wish to enter a protest against our giving any adherence to the lecturer's conclusion that it passes the possibilities of human accomplishment, I thank you for having given me this opportunity of speaking, and I think we are greatly indebted to the lecturer for so kindly giving us this lecture.

Major-General C. E. WEBBER, C.B. (late R.E.): -The appropriateness of His Excellency M. de Bloch's lecture to this audience and to this Institution would be doubtful, were it not that the whole essence of our public training is to listen to the other side. This Institution is essentially a place in which we study war; our respected lecturer's motive is to try and show that the game is "not worth the candle." After reading through his voluminous paper, I am chiefly impressed with the width of the range of subjects upon which it touches, but I am personally most struck with the frequency of the instances in which I find myself agreeing with the author's conclusions, but at entire variance with him as to his premises, and *vice versa*. My differences with him are remarkably emphasised in the conclusions he has drawn from the war in South Africa. At the same time, there is a great deal in the paper with which we all more or less agree,

and we cannot be too warm in our recognition of the great labour the writer has spent (as he tells us during the last ten years) on his subject. On pages 379 and 380 of this year's JOURNAL of the Institution M. de Bloch will find one reference to his views, which I made in my paper on "Army Reform," read in this theatre on 20th February, 1901. Then I contended that history in every way proves that the fear of wholesale destruction has never been a deterrent of war. My inference is, that civilisation, while it creates more in *personnel* and *matériel*, the loss of which we dread, will only tend to shorten wars and to spread their destructiveness over a shorter time. No, Sir. The more perfect our system of defence, the more we learn to apply science and all the resources of nature for purposes of self-protection, the less likelihood there will be of war. M. de Bloch's premises are so often inadmissible, and his conclusions so often wrong, that I shall leave all but one or two to the other speakers at this meeting. The two papers I have read this year before the Institution will, I think, exempt me from being classed amongst what M. de Bloch describes as the "Military routinists." Very soon after the invasion of the Colonies I wrote publicly as follows, to try and demonstrate that—"The result of the so-called 'mobilisation' of horse, foot, artillery, and engineers, in the 'regulation' proportions of each arm, was quite unsuitable for the conditions by which (with all the knowledge of the past in our records), when war became inevitable, the country was faced in October of 1899; and that a *mobility* of the rifleman, inferior to that of the enemy, had been the underlying and disabling factor in the case of every failure or check which had up to that time occurred in the operations for the defence of the Colonies and the relief of the invested places." Let me ask M. de Bloch to consider that, if the British foot soldier's average rate of movement is 1, that of the Boer on his horse is 2, and that the day's average march at 2 1/2 miles an hour of the former is 10 miles, while the Boer can move at the rate of 5 miles an hour over 20 miles of ground. Simple arithmetic shows that the latter has an advantage, individually and collectively, of 4 to 1 over the former, until only the bayonet separates them. When the history comes to be told we shall find this deficiency in mobility in the largest proportion of our troops, in comparison with that of the majority of the Boers, has told on every occasion when they have been in touch. Our generals were forced to attack positions because they could not mask, turn, or ignore them. And these were positions which the mobility of the Boer enabled him to occupy, change his front, or abandon, at his pleasure. In European warfare, when the relative proportions of the three arms is somewhat similar in the opposing armies, if infantry at heavy sacrifice captures a position from infantry, they reap some reward. In this war the result was comparatively insignificant. The value of each arm and its preponderance in Europe varies slightly with the conditions of country and of organisation, but there is no example in which all the infantry is mounted, and all the cavalry is mounted infantry. The conditions I have described, would have existed, with every European Army, no matter whether French or German, Italian or Russian, that had to be sent across 6,000 miles of sea to carry out the same task. My hearers will therefore understand, I claim, that the standpoint of M. de Bloch's view has a very defective foundation, and that the ground for his conclusions is equally unsteady. Let us take No. 2 of his subjects (page 1320), on the *constant impossibility of determining the enemy's position*, and his attributing *the failure of the reconnaissances to the new conditions of war*. This impossibility and this failure were due solely to the superior mobility of the *gros* of the Boer army (if we can call it a *gros*) in their own country with horses accustomed to work and live on the veldt. This constitutes no "new condition of war" using our lecturer's own words. It is much to be regretted that he did not complete his study by a visit to South Africa. I have stated elsewhere, that, both as regards natural (geological) and artificial (houses, fences, enclosures, villages) features, there is only the remotest resemblance between South Africa and Europe, the greater the civilisation in the latter Continent the remoter it is. Where did he get his information, namely (see page 1322), that "the greater part of South Africa is, compared with much of Europe, absolutely flat"? But, to return to the question of *mobility*, whether on the flat or on the mountain side, South Africa is the ideal country for warfare with mounted riflemen, especially if man and horse belong to the country. European infantry organisation is out of place, except for the defence of towns, posts, and lines of communications. It was *only* their mobility, added to their knowledge of the country, that enabled the Boers to effect surprises and captures during the early stages of the war. How blind the best students of war throughout Europe have been to these conditions is a poor excuse for the misunderstandings, misrepresentations, and reports as to our Army, with which Europe has been flooded for the last two years. I do not support M. de Bloch when he says "the same mistakes and want of foresight which we have seen among the British would have been reproduced by the Germans," because I believe that, with the German military system, *if* it had been possible to have brought about the same situation that exists in South Africa after a century of German rule, our neighbours would have had man for man, a mounted rifleman, ready to take the field, with which to meet the Boers. But if any Continental Army had faced the

Boer invasion under the same conditions namely, riflemen on foot against riflemen on horses, the statement our friend quotes (and repudiates) namely, "any Continental Army would have beaten the Boers long ago," only proves the ignorance of those who made it. It has been so-called non-jingoism, or non-militarism, the namby-pamby so-called humanitarianism (which always ends in producing the most suffering), it is "peace at any price" -into which our friend wishes us to retire -which has brought about a state of things, unparalleled in the history of nineteenth century warfare. These critics do not the least understand that if Baden-Powell could have maintained 500 mounted riflemen in Mafeking, he would never have allowed the Boers within 10 miles of the place. In subject No. 6, M. de Bloch commits himself to "the essential" and he calls it *invisibility*. If he had written *mobility*, he would have shown that he understood his subject better. There is not a single little war in which our Army has not dressed and equipped with *invisibility* in view. It is common knowledge with us. In the same part of his lecture headed "frontal attacks," he says the Boers had "no training." On the contrary, I say, they were, in their capacity of mounted riflemen, as nearly the makings of George Chesney's "invincibles" (described nearly 30 years ago in this room) as could be. Contradicting himself under heading No. 7 (page 1331), he calls the Boers "soldiers by birth." He couples with this their use of cover (I will not call them trenches), and continually refers to their "entrenchments," yet, he says, they had "no training." It was *only* their *mobility* that enabled them to mislead reconnaissances, to shift their line of defence with rapidity, to disperse and concentrate at points on that line, to occupy, or not occupy, their so-called entrenchments until the last moment -in fact, to follow tactics, denied to riflemen on foot in a primitive country when the opposing riflemen are mounted. One more word in defence of our "Regular Army." M. de Bloch lauds the civilian, the amateur, the colonial troops, but he tries to prove too much. Why did he not get at the fact, namely, that the "Colonials" and the "English Yeomanry" were all mounted as soon as they landed? Of course, against a swarm of mounted riflemen, to use his expression, they "were infinitely more useful than the Regulars." Yes, possibly, so long as those Regulars had to toil on foot. But does he know that we have had 10,000 mounted "Regular" infantry in the field, besides these Colonials and Yeoman? And that the work of Lord Roberts' forced marches and crushing blows would have been absolutely impossible without our cavalry and the mounted infantry? And does he know that, although few in number, our cavalry acted practically as mounted riflemen, and, as rapidly discarded the rôle of the *sabreur* as they will, no doubt "under regulations" have to re-adopt it when they return to Europe? As our Chairman has said, the *notes* to M. de Bloch's paper are full of interest, although it is outside the subject to which I have tried to confine myself, I should like to say a word about the "War of the Future." My paper read here on the 20th February last does not admit that I agree with General von der Goltz that "the battle of the future is a sphinx of which no one has expounded the riddle." The subject is one of enormous interest, and must be treated on similar lines both for war on sea and on land. I hope that the Council of the Institution will allow me to stand again on that platform and try to disentangle its problems.

Admiral the Hon. Sir E. R. FREMANTLE, G.C.B., C.M.G.: - M. de Bloch has argued throughout that war has become practically impossible on account of the great loss of life which must be, he holds, the result of improved destructive weapons. The argument is a deductive one, and the only facts to which he has referred are those resulting from our present war in South Africa. These, I submit, do not support his view, and it is nothing to the purpose to show that the improved weapons have necessitated a change of tactics. In looking forward it appears to me that the safest guide is to draw conclusions from the lessons of history. Do these show either that actions and campaigns have been more bloody and less conclusive in recent times? I submit that the contrary is the case. In the diagrams on the walls I observe that reference is made to naval developments, and I will take them first. Neither the Yalu battle, Manila, nor Santiago was specially bloody, but all three were sufficiently conclusive; and if we turn to historical sea fights, the loss of life at Trafalgar was small compared with Actium or Lepanto. The same may be said of land battles. At Arbela, 330 B.C., 300,000 Persians are stated to have been killed: while at Cannæ, 716 B.C., 40,000 Romans are supposed to have perished out of a total of 138,000 engaged. Again at Tours, 732 A.D., 75,000 Saracens are supposed to have been killed. This, however, is ancient history, and probably the numbers are much exaggerated. But at Bannochburn in 1314 some 50,000 lost their lives out of 130,000 engaged. Let me turn now to the Napoleonic wars, and we find a loss of 80,000 out of 400,000 at Leipsic-, while at Gravelotte, the most bloody battle of the Franco-German War, the loss of life did not exceed 44,000 out of much the same number engaged. In all wars the loss of life in action has borne but a small proportion to that caused by exposure and disease, and our war in South Africa has been no exception to this rule. If then, this has not prevented wars in the past, I see no reason why it

should do so in the future, and I cannot accordingly concur in M. de Bloch's conclusions that peace is more likely to follow our war in South Africa than it was to result from the International Exhibition in 1851. I cannot follow this subject, but I think we may fairly hope that as civilisation progresses there may be increased reluctance to have recourse to war; but until we can produce a power like "Vril" in Bulwer Lytton's "Coming Race," which can destroy armies wholesale, I am incredulous that wars will cease in all the world through any modern developments of instruments of warfare.

The meeting was then adjourned to Monday, 15th July, to enable M. de Bloch to prepare his reply.

**15th July. Major-General Sir F. MAURICE, K.C.B.,
in the Chair.**

Colonel LONSDALE HALE (late R.E.): -Before I read the reply of M. Jean de Bloch to the discussion on his lecture, I have one remark to make. There is one point in the lecture which I think it desirable to bring to the notice of M. de Bloch, and also to those who listen to the lecture. In the second lecture the lecturer said: -"Just as Plevna was a revelation from the point of view of the use of entrenchments, the South African War has been a revelation from another point of view, showing not only the superiority of the defensive, but also the enormous increment of strength given to a civil population's resisting power by smokeless powder and the modern rifle." I venture to differ from that entirely. The South African War is no example to us of a war between France and Germany, with French and Germans fighting for their independence. We have carried on the South African War on the strictest principles of humanity; but no nation in their senses, French or German, or any other Continental nation engaged with each other, would ever carry on a war on the same humanitarian principles against each other as we have been compelled to do in South Africa. They would not form refuge camps for the women and children; they would not accept the oath of gentlemen found in plain clothes with rifles, and then release them. I think there is nobody in this room, or anywhere else, who knows more about the way in which the Germans carried on the war in 1870 than I do. I had the advantage of being at the Conference on the "Usages of War" which was held three years afterwards, and I learnt much about it also there. I am perfectly certain that in any Continental war, whether it is France, Germany, Russia, or anyone else, they will carry on their war with the utmost rigour: they will shoot the people they want to shoot, who get in their way; they will not be directly cruel to women and children, but they will not provide for their sustenance. They will burn their houses and terrorise the nation, as well as destroy the armies. To my mind, that is a far more kindly way of carrying on a war than on the humanitarian principle. There is one other point to which I would draw attention. M. de Bloch says: -"In a war between Great Powers, as I have attempted to prove, there is no prospect either of great victories or of definite gain by means of arms." I differ a little from that. Surely there will be human beings carrying those arms? Surely there will be generals who make mistakes, and surely there will be generals who make the fewest mistakes who get the better of those who make the most mistakes? It appears to me that the lecturer has gone rather far in thinking that by giving a poor feeble creature a powerful weapon that he will alter the man himself. I do not think he will. M. de Bloch has given us his ideal of a position manned by indifferent troops. The description corresponds almost word for word to the position of the French defenders of Orleans on its western side on the 4th December, 1870, and also to the character of the defending troops. Here an "accident" occurred. A successful charge of a small body of German cavalry against a few French cavalry eventually produced such a panic among the infantry, ridden over by their own people, that the outer defences were abandoned, and a German column marched through the defences right up to the south-western gate in the city walls, demanded the evacuation of the city, and it was Germans - not French - that passed the night of the 4th December in Orleans.

M. Jean de Bloch's reply was as follows: -

I must ask your indulgence and pardon if my reply to the criticisms passed upon my lectures should seem too long. But the matters dealt with in those criticisms are of great importance, and to attempt to answer them otherwise than in detail would result in failure. In regard to Sir Howard Vincent's interesting remarks,

I have very little to say beyond thanking him for his appreciation of my work. Sir Howard Vincent says that he has extracted from my lecture over forty direct propositions or teachings, each of which claims careful examination. I think that it is his own profound intellect for analysis which has developed the conclusions urged by me. I am glad to see that Sir Howard Vincent in his lecture delivered here a year ago was in accord with me as to the importance of entrenchments and invisibility in all tactics and in all the conduct of war, and his conclusion on the latter subject cannot be too often repeated: -

"When the Army comes home, you will be surprised to find how few members of it have ever seen a Boer, save with a flag of truce, or as a prisoner. I did not meet half-a-dozen officers in all Sir Redvers Buller's army who saw one at the battle of Colenso." He cites another extract from the book "The Work of the Ninth Division": -"No human interest, a bare plain, and 800 yards off a line of trees, not a Boer or even a puff of smoke to be seen all day. Only if one raised his head, the ping of a bullet, and the sight of another dead or wounded comrade." Again, a general writes in February, 1900, in the Orange Colony- "We have nearly as many guns as spades, but I am inclined to think the humbler and rather despised engine of war was the more useful of the two." And again: -"You may return to Warsaw, assured that you have contributed something to press home Lord Roberts' teaching in the field that attacking troops to live must in future be at least 20 paces apart; and other and humbler convictions that soldiers cannot attack in the face of modern weapons otherwise than in loose formation, avoiding as far as possible the sight of the enemy, creeping behind inequalities of the soil, digging themselves into it like moles."

In these few words it seems to me that Sir Howard Vincent touched with a master's band the true causes, the true solution of the failures of the British Army; that is invisibility, the importance of the spade, the impossibility of advancing by German regulations, whether in partial attacks, or in the deployment of armies composed of brigades, divisions, or army corps. The points raised by Sir Howard Vincent are all the more useful, as they facilitate what I wish to say concerning the remarks of Colonel Downing and Colonel Graves.

Colonel Downing's remarks on the question of artillery preparation are of the utmost importance, especially if we admit, as is generally admitted, that a preliminary superiority of artillery fire is essential to the success of infantry attack. Now, on this point my argument was that against entrenched men, artillery fire was proved to be almost worthless, and I declared that the South African War reinforced the lesson of Plevna, which, in Todleben's words, was: "We would fire with our artillery a whole day for the purpose of killing a single Turk." Colonel Downing, whose high authority I gladly recognise, expresses dissent from my contention. He says emphatically that "there is no difficulty in keeping down rifle fire with artillery if properly used." Now this objection is a most important one, and if it can be sustained it destroys a great part of the argument as to the difficulty of attack under modern conditions. I am, therefore, compelled to examine shortly the facts cited by Colonel Downing. It appears that he can quote only one engagement of importance in which the British artillery overcame the Boer guns, and kept down their rifle fire. But this engagement was of such a nature that it proves absolutely nothing. In the first place, the battle of Rietfontein was a small and indecisive engagement, only intended to be a demonstration and reconnaissance in force. It was fought for the purpose of keeping the Boers engaged, and facilitating the retreat of the British from Dundee; and as it never developed into a serious attack or close approach to the Boer trenches, it is quite impossible to say definitely whether the artillery had any real effect upon the Boer defence.

In the second place, Colonel Downing tells us that the British had three batteries of artillery, or eighteen guns, against four Boer guns; such a superiority that, even if the objects of the defence had been very important, it would have paid them better to have withdrawn their guns from the duel in order to bring them out when the infantry attack was approaching, and the attacker's artillery had ceased fire. But as the infantry attack at Rietfontein never came to close quarters, we are quite unable to say that the Boer artillery was really and finally put out of action. Even Colonel Downing only says that the Boer artillery fire was "kept down" while the British continued firing. In a normal war it is quite impossible to expect such a superiority on the attacker's part as eighteen guns against four. And how would the artillery have served the attack if they had not been destroyed-by firing over their own infantry's heads? General Skugarewsky, formerly Chief of the Etat-Major of the Russian Guard said: -"See what happens in firing in time of peace. The targets are at a distance of some hundreds of metres, and many shots strike the ground a dozen

paces from the marksmen. What shall we see in time of war with Reservists! Fire above the heads of one's own soldiers will certainly be a most dangerous operation." The South African War proves how reasonable are these remarks, for there were many cases of the advancing British infantry being struck by their own artillery fire. But how can we attribute any importance to this single incident -a battle which neither side regarded as serious, and in which the Boers had not prepared for resistance with entrenchments, as they always did in the important battles of the war? Is it reasonable to cite a single exceptional instance, when we know that the other battles of the war taught precisely the opposite lesson? In my lecture I cited the astonishing cases of the artillery bombardment at Paardeberg and Spion Kop, which showed that guns employed against entrenched troops were some nine hundred times less effective than when employed against entrenchments. It is impossible to prove that these deductions are erroneous, and it would be particularly difficult for Colonel Downing, who so admirably succeeded in defending Ladysmith against the Boer artillery with little loss-thanks to entrenchments and bomb-proof shelters.

At Ladysmith four months' bombardment produced a casualty list of 232 men killed and wounded, or about two men per day- a little more than Todleben's "one Turk a day." At Kimberley and Mafeking the artillery produced the same insignificant results. In short, the whole experience of the war showed that artillery produced little or no effect upon riflemen, *if these latter were well entrenched*. When, as at Spion Kop, artillery was turned against exposed men in close formation, the results were very great.

It will be objected, of course, that the effect of artillery is a moral effect. But no moral effect was ever produced against the Boers by artillery fire. Moral effect, it must be remembered, depends on fear, and on fear alone. When entrenched men are fully convinced, as the Boers were, that they have nothing to fear from artillery, we cannot expect that their *moral* will be in any way shaken. But Colonel Downing makes an important reservation when he says that "if properly used, there is no difficulty whatever in keeping down the rifle fire of the defence." And in that case, he adds, "the infantry attack must succeed." Now we know that the British infantry attacks did fail even when attempted with a large numerical superiority. At Modder River the frontal attack made by 7,000 British against 4,500 Boers failed with heavy loss. At Magersfontein, 12,000 British attacked about 5,500 Boers, and were repulsed with heavy loss. At Colenso 20,000 British attempted a frontal attack upon about a quarter of that number of Boers, and were beaten back, leaving 11 guns in the hands of the enemy. At Spion Kop the British were in still superior number, yet they were driven back across the Tugela with a loss of nearly 2,000 men. Finally, at Paardeberg some 16,000 British with enormously superior artillery attacked 4,000 Boers, and were repulsed after losing 1,300 men, the Boers losing not a tenth of that number. In most of these battles the Boer losses are not definitely known, but according to their reports they were not more than a tenth of the British. At any rate, we know that at Paardeberg they lost even less than that in proportion, and there is therefore no reason to doubt the accuracy of their declarations on the subject of losses in the other battles.

It is necessary therefore for Colonel Downing to explain. For there is nothing to show that the artillery was not properly used. The regulations were followed, and they are about the same in all Armies, that is - employment of masses of guns, unity of fire command, employment of the ground to bring the batteries into action under cover, co-operation and mutual support of the various arms. Foreign evidence confirms this. The Austrian attaché, Captain Trimmel, of the General Staff, said that the accuracy of fire was certain, "for shrapnel cases were found scattered freely within from five to ten paces of the Boer works." The shell fire was equally ineffective, as shown by the losses and the ease with which the Boers held to their entrenchments. Sir Howard Vincent in his lecture, delivered a year ago at this Institution, tells us exactly the same thing, when he says:- "The opinion that ten minutes of infantry fire causes more damage than ten hours of artillery merits study."

In a work which has since appeared, the German artillerist, General Hauschild, studies this question, and I have already cited what he said: - "Nothing remains for the attacker but to have recourse to trenches and earthworks. But it is obvious that for this the attack is in a much less favourable position than the defence. As a prelude to assault an attempt must be made to destroy the structures sheltering the troops in reserve, and this cannot be done without howitzers and heavy siege guns, and is an almost impossible task, owing to the rapidity with which, as at Plevna and in South Africa, new works can be thrown up." I

have cited also the opinions of other soldiers, the German generals, Rohne, Müller, Janson, von der Goltz, all against Colonel Downing's view that attacking artillery must succeed.

The second example given by Colonel Downing of the help rendered by the guns in the withdrawal of a squadron of cavalry near Ladysmith, belongs to the same category.

Colonel Downing finishes by saying that "whatever improvement is going to be made in our *matériel*, it is in the right direction." I can only conclude that no matter what improvements are effected, you will change nothing. The defender as well as the attacker will adopt all improvements, and as he will still have the advantage of invisibility, of having his defences prepared in advance, of having his guns masked, his position studied and measured, and, finally, as General Pellet-Narbonne says, of forcing the attacker to fight on country chosen by him; it is he who will profit most from improvements; and the comparative advantage of the defensive will be still further increased. The reason why Colonel Downing will find it difficult to admit this, I find in Sir Howard Vincent's words, that "no artillery officer will ever admit that his range-finder and his careful laying were ineffective." For these reasons I am unable to agree with Colonel Downing that artillery can be relied upon to shake the defence of men who are well entrenched. And Continental artillery, I must repeat, will have to attack artillery of equal or greater power, and permanent fortifications, not as was the case in South Africa, a much inferior number of guns posted behind temporary earthworks.

Colonel Graves' first objection is that my arguments were based only upon ballistics, such as the value of long-range firing, flat trajectory, and the effect of modern artillery and rifle fire, and that I did not take sufficient account of the conditions of the country which were favourable to the Boers. Colonel Graves' objection comes a little too late. I have heard it many times from the military defenders *à outrance* of the *status quo*, who declare that the improvements in arms lead to nothing, since the farther they go, the more they become dangerous, the more chance is there that the defenders will lose their heads, and then "the rifle is worth no more than a pitchfork." But the South African War refutes all these arguments. The Boers never lost their heads and did not fire badly. Therefore I should like to point out why what Colonel Graves calls ballistics has changed the rôle of cavalry. The value of cavalry in the past consisted in its swiftness multiplied by its mass. A mass of cavalry launched at a gallop against a line of infantry vanquished by inspiring among the infantrymen the fear that that mass would fall suddenly upon them like a storm. From the moment the cavalry was launched at a gallop for the attack, as in the days of Frederick the Great, of Napoleon, of the Crimean War, up to the moment of impact, it could be struck with only one volley or at most by two, and this was of little danger owing to the high trajectory, the clouds of smoke, the want of precision of fire, and the comparatively small penetration of bullets. The infantry square once broken was then exposed to destruction. But with the new rifle, and the new formations of battle, even in 1870 cavalry attacks became an illusion, with few exceptions. To-day every petty detachment of infantry forms a fighting unit so powerful, as I have shown in my lecture, that if a company of infantry, that is to say some 200 rifles, begins fire against cavalry at 800 metres, before the charging cavalry can arrive within 100 metres they may have killed some 520 horses. In this respect the conditions of cavalry are absolutely changed. I speak only of fire from 800 metres, but we have Lord Methuen's testimony to the fact that it was impossible to sit on horseback within 2,000 yards of the Boers. With the defending infantry always entrenched how can we speak of cavalry attack?

But that is not all. Another essential condition of cavalry attack, the action of the mass, exists no more. Colonel Graves says himself that Captain Moore of the Ulster Yeomanry made the men charge with 20 yards apart. To quote his own words: "Captain Moore opened out his men, 20 yards from knee to knee." But this in no way resembles the massed cavalry attack which I declared to be obsolete. For such reasons I do not find that my conclusions in this respect have been shaken by Colonel Graves. In regard to his reproach that "I take little or no account of the conditions on the Boer side with regard to the country, etc.," I may say, firstly, that I wrote only of the application of the lessons of South Africa to a great war, and in no way with the object of criticising or praising the British Army. If my judgment has been favourable it is because it is my profound conviction that no other cavalry would have done better, and that those soldiers who most criticise the British do so to a great extent against their own convictions, such being the *mot d'ordre* from above. But in regard to this reproach that I have not paid sufficient attention to local conditions, I was quite aware that the objection would be brought against me, and I

considered this question of the local conditions for cavalry very closely. But the conclusion I came to was that though South African conditions are very different from those of Europe, it does not necessarily follow that the advantages for the defence are greater in South Africa than they would be in Europe. The fact that the British largely outnumbered the Boers is on its side a "peculiar condition" of the South African War, for in the Franco-German War, which I have considered, the combatants will be equal, and the defenders will have prepared their positions in advance; therefore in this most important factor, the European conditions are much more favourable for defence than the South African conditions were.

Again, Colonel Graves speaks of the great advantage of the Boers in fighting in their own country, and of obtaining information from the inhabitants. But this is one of the conditions of the defence everywhere, and one of its greatest advantages. If the Germans penetrated into France they would meet in this respect even greater difficulties than the British, for they would have no friends, whereas the British had resident Englishmen and Kaffirs to supply information. This is one of the chief advantages of the defence, and it applies everywhere, and not only in South Africa. But I think Colonel Graves is still less consistent on another point. He agrees with me as to invisibility. He says: -"But invisibility, to my mind as a cavalry soldier, only beats mobility by a very short head." If Colonel Graves persists in comparing the two qualities, I will answer him in the same way by saying that mobility will serve very little against invisibility. Suppose you have the speed of Fournier's automobile, it will not serve you against me, if I remain invisible. But Colonel Graves proceeds to speak of the superior mobility of the Boers, owing to which they were able to turn every flank attack into a direct attack. But, surely, other armies might have done the same, even if they possessed only the *same* mobility as the attacker. General von der Goltz says that of 100 attempts at turning movements, 90 end by coming upon the enemy's front. The Boers were fighting on interior lines, and, therefore, quite apart from their mobility, they had every opportunity to turn flank attacks into direct attacks; and not only will the European defender have this advantage, but a much greater one, since entrenched camps and fortresses will give him what the defenders did not possess in South Africa, as well as full protection for his flanks. I agree entirely with Colonel Graves as to the value of mobility. But I have been dealing with European conditions, in which the mobility of all Armies is about the same. Colonel Graves says that mobility would have been very useful for the British in their first attacks. That is quite true, if they had been more mobile than the Boers. But the attacker in the Continental war which I have considered will not be more mobile than the defender, and, therefore, I do not regard mobility as a determining factor in a Continental war.

Very characteristic, but unfounded, is the objection made by Colonel Graves when he says, to quote his own words: - "The Boer fights to prevent his foe getting at him; while the British, I am proud to believe, fights with the view of getting at his foe." Surely the question here is not who fights in the most chivalrous and romantic way, but who fights best with the object of gaining victory. The question is merely which is the best way of fighting under modern conditions. Now, as Colonel Graves makes this comparison for the purpose of explaining British reverses, we must come to the conclusion that the unromantic Boer way is the best. But if this is so, this is the method which will be adopted in a Continental war, in spite of all regulations and manœuvre drill. The French, for instance, are a very chivalrous and romantic race; but when it is a question of defending their fatherland, they will fight in the way that is most likely to gain victory, and not in the way that looks best in a picture. Therefore, if the Boers were most successful because they lay behind entrenchments, never exposed themselves, and crept instead of walking, they merely adopted themselves to new conditions of war, and did what Continental military men have often declared it was necessary to do. There is no use in accusing the Boers of fighting in an unromantic way. Their object was to gain the victory; and if the so-called Boer methods, that is to say, ingenious entrenchments, creeping attacks, and a general preference for the defensive, are the best, we may be sure that they will be adopted in a future war. Colonel Graves says that, as a consequence of this differentiation, "we find greater losses on the part of the British troops." Exactly. But that the Boer method did not waste lives unnecessarily is its best justification.

To those who do not agree with this opinion, I will say that it is unworthy to regard war from the point of view of a sportsman, and to regard an Army as an instrument for seeking adventures, and showing address and audacity. Those who regard war in this light had better go hunting lions or competing in championships. The sacrifice of a single life merely in order to show heroism is nothing better than a crime. The sense for appreciating and admiring what Colonel Graves admires is probably lacking in me,

but I fancy that all the mothers and all the wives and children will be on my side in this respect.

Colonel Graves objects to my general statement that the rôle of cavalry in attack has disappeared. I said that cavalry reconnaissances and attacks against infantry, cavalry *en masse* against cavalry, and cavalry in pursuit had lost their old value. Colonel Graves' objections are very characteristic, and show how a great number of soldiers have forgotten and learnt nothing. That is why I will deal a little further with Colonel Graves. He cites, for instance, the opinions held in 1801, when the Emperor Paul of Russia ordered the Cossack invasion of India, and the opinion held in 1874 by Sir George Chesney on the rôle of cavalry in invasion. But this is begging the question, which was the effect of *modern* changes on cavalry. What has happened since 1801 and since even 1874? The horse has remained the same, but the power of the defensive in consequence of the improvements of arms and entrenchments has multiplied a hundredfold. Obligatory service has made it possible to organise the defence of frontiers by hundreds of thousands of reservists, which did not exist in the past. The whole of my thesis is based on the changes which have taken place since 1874. Therefore, Colonel Graves' argument from past history is beside the question. Nor do I believe with Colonel Graves in the possibility of raids by cavalry with the object of devastating the enemy's country, and I find in accord with me the German official *Jahresbericht*, for 1900, which tells us that. -"The idea is gaining ground with regard to the proposed incursions of great masses of cavalry into the enemy's country during the first stage of mobilisation, that the gain would not be equal to the price paid. With a well-organised and active frontier guard, flying columns could succeed in drawing hostile cavalry into positions where it would be enveloped and broken up, by depriving it of rest and food, so that the cavalry thus sacrificed would be lost for subsequent operations."

Russia, with her great masses of Cossack cavalry, is the only country which might prove an exception, and that would be only by sacrificing a considerable part. But I cannot see what good effect such sacrifices would produce. I have shown also that reconnaissances in force such as those projected by von Moltke in his plan of campaign are absurd nowadays, when the effect of rifle fire is so great that Lord Roberts, as he lately told us, had to increase the distance between the files in infantry attack from 6 paces to 10 and then to 20. And it is necessary again to recall Lord Methuen's observation that "it is impossible to sit on horseback at less than 2,000 yards from the enemy."

In conclusion, I may point out that the British cavalry in South Africa was never able to be used for attacks against infantry. What is important still more is that cavalry was generally useless for pursuit, and for turning retreat into rout, as it was in the past; always because, owing to the great distances at which battles were fought, the horsemen, kept in the rear or on the flanks, were exhausted before they could come into contact with the retreating Boers. Against this Colonel Graves again advances the old argument of special conditions. I am quite willing to admit the special conditions. But these conditions, the great distances, the thinness of the population, do not largely affect the tactical lessons of the war. They had a great effect on British strategy, on the line of advance, the food supply, and the difficulty of permanently occupying the country. But surely it is too much to say that these conditions changed the tactical features of every battle.

What Colonel Graves says about cavalry having a great future is also very characteristic, and it is worth repeating literally: -"Let me give you one little instance of the action of cavalry in an attack, that came to my personal knowledge from one of the men that I was fortunate enough to select to go out with some of my Imperial Irish Yeomanry. At a place called Koonat, Captain Moore... had a squadron under his command.... A commando of Boers, about 300 in number, was located on a kopie at this place, Koonat.... He happened to know the country well.... He opened out his men, twenty yards from knee to knee; they took up all four reins; they sat down and they rode like demons. They swept over the kopje, took a number of the Boers prisoners and the whole of their wagons, and only lost one man, wounded and one horse killed." But I think that every intelligent man without being a tactician or a strategist, will say that Colonel Graves recounts a tale which is quite exceptional and enigmatical. How could 180 men on horseback under ordinary conditions attack 300 Boers on a kopje with a single man wounded and one horse killed? If the cavalry had been massed, we might find an explanation in the moral effect which it produced on the Boers. But this cavalry charged with 20 yards from knee to knee; and the 300 Boers armed with Mausers were so terrified that they could not put a single man out of action! Colonel Graves says that cavalry is an arm of opportunity. Quite true; but the question is whether the opportunity will

present itself. This is what Colonel Graves has not satisfactorily answered.

Again, consider the question of turning movements. Colonel Graves says that I "have been courageous enough to hold turning movements in contempt." This is a mistake. I defended turning movements, and pointed out that if frontal attacks were impossible, turning movements must be the only means of forcing the enemy's retreat. What I pointed out was that South Africa showed that turning movements required a great superiority, and that no Continental attacker would possess such a superiority. In this sense cavalry had enormous importance in South Africa, it was the determining feature of the whole situation. But the cavalry was mainly used as mounted infantry.

But what I did state was that cavalry had lost its importance in a Franco-German War, at any rate at the first attack, which I do not believe could succeed. The first condition for turning movements is exposed flanks. But on the French frontier, where will a daring German cavalryman find exposed Ranks? The French frontier, with the exception of two openings intentionally left, is completely guarded by a chain of fortresses and fortified camps. The openings may be guarded by entrenched riflemen in lines ten or twenty times thicker than the Boers had at Colenso and Magersfontein. But we all know that cavalry cannot charge fortresses; can they charge entrenchments? I would ask Colonel Graves to point out one position on the French frontier which might be turned by cavalry. If the first two French lines of defence were broken down, then cavalry might undoubtedly be used for turning impregnable positions. But it cannot be used during the first attack. But if, as I believe, the first attacks must fail, since they must be frontal, what rôle can cavalry have?

When a position cannot be taken by direct attack, and it has nevertheless exposed flanks, a well-made turning movement with cavalry or mounted infantry may be successful, though even then the defender on interior lines will more likely easily turn it into a new frontal attack. But if there are nowhere in a great Continental war exposed flanks which can be turned, how can cavalry be used? For England which has to fight in her Colonies with savage people it is another thing. But here, of course, are special conditions which I do not discuss, the object of my study being very different. All I would say is that for these objects the British cavalry must be specially created and trained for its special purposes, and not for a Continental war.

The questions treated by Sir N. Bowden-Smith, though very important for England, are really political, and do not touch upon any essential part of my theory. Admiral Bowden-Smith referred to my pamphlet "Lord Roberts' Campaign and its Consequences," and he seemed to misunderstand the object of that pamphlet. The pamphlet was written in the early spring of 1900, when Lord Roberts was gaining his first great successes over the Boers, and its object was to point out that such successes would not necessarily terminate the war. At the time the pamphlet was written public opinion in England was almost unanimous in agreeing that Lord Roberts' successes would continue, and that the end of the war would rapidly approach. In my pamphlet I made it my object to controvert that opinion, for though I was in agreement with English critics that Lord Roberts would march successfully to Pretoria, I differed from them in thinking that that would mean the end of the war. I pointed out, firstly, that the modern rifle was primarily a guerilla weapon, and, secondly, that the Boers were the best guerilla material in the world; and from these two facts, taken together with the character of the Boer country, the lack of railways and roads, and the thinness of the population, I predicted that a guerilla war would follow the breakdown of the regular Boer resistance, and would certainly last a very long time. But Admiral Bowden-Smith is mistaken in thinking that I declared that England could not end the war. I declared specifically that she could end it, but that the only means of doing so was by gradually wearing down the Boers, and that that would take a long time, and involve much loss in men and money. In particular, I pointed out that England would lose heavily from disease, and that great difficulties would be met with in supplying the men with food and guarding the railways.

This pamphlet was written before the outbreak of the guerilla warfare, and I think I can, therefore, claim that my predictions have been amply fulfilled. But in writing it I had no political object whatever, and I expressly declared in it my faith of England's love of freedom and peace. My present lectures had absolutely the same purely scientific object, and I think it is useful to declare formally that I have no wish to express any opinion in regard to the political problems of the present struggle. If I spoke of the

necessity of a conciliatory policy, it was as a general lesson for the entire world, and it was expressed in view of the danger of national wars, which has increased for two reasons: the long range and great accuracy of fire of modern rifles, and the use of smokeless powder, on the one hand; and, on the other, the profound sentiment of nationality which exists everywhere. Admiral Bowden-Smith makes, perhaps, too little of these factors; and, on the other hand, he supposes that the special conditions of South Africa are the principal cause of the difficulties met with by the British. These conditions, we are told, are the great mobility of the Boers, the thinness of the population, the scantiness of local resources, difficulties of transport owing to the great distances, and to the absence of a uniform among the Boers.

It seems to me that these objections are not all well founded. The importance of the Boer mobility was great owing to their small numbers and their lack of regular lines of defence, fortresses, and entrenched camps. The want of local resources would, on the contrary, be infinitely greater in Europe than in Africa, in spite of the greater density of the population. Again, guerilla warfare would begin only a long time after the opening of hostilities. At the first, the hundreds of thousands of troops on both sides would probably rest on the same lines, so that it would be impossible to trace their movements on the map. "You will not be able to trace it," says General von der Goltz. So that scarcity of provisions would in Europe present grave difficulties as regards transport. I have already treated this question, and I shall add only a few words. The protection of the railway lines in France presents infinitely more difficulty than it did in Africa, owing, on the one hand, to the nature of the country; and, on the other, precisely to the density of the population, which will be absolutely hostile as a whole, and not, as in South Africa, only partially hostile. As regards distinctive uniforms, when the guerilla warfare begins they will probably not exist. There is no doubt that khâki, or some similar material, will impose itself by the force of things. After some months in the field there will remain only a vestige. In a Continental war everyone will have passed through the ranks, and all will have a right to wear uniforms. As on sea letters of marque are given, so on land; the Governments will probably issue certificates which will protect the reservists. The reprisals made in 1870 upon the civil population cannot be made at present, in view of the mass of reservists, and in any case the defender would not have much more to suffer than the attacker.

In regard to what Admiral Bowden-Smith calls a conclusion which is rather a favourite idea of mine, that Regular Armies and trained men are not necessary, I am afraid that I cannot have expressed myself clearly. I have no belief whatever that training is unnecessary. What I do urge is that present methods of training employed in the great Continental countries are erroneous, that long service is not necessary, and that such training as is given should rather be on Swiss lines. I believe that it is not training alone which gives power, and that training should be individual, and not mechanical. Of course, I am aware that this is not an original view, but the support which it has gained among actual participators, in the South African War is very valuable. Sir Redvers Buller expressed himself publicly in this sense some months ago. General Ian Hamilton at a dinner only a few days ago said the same thing. I quote from the newspaper reports:—"Like M. de Bloch, General Ian Hamilton holds the view that on the trained individual, and not on the massed troops, will the victories depend in future. The day of large Armies, he thinks is past. The South African War has shown that a well-trained man, with a good eye and intelligence, is equal almost to a regiment of men who have to operate by word of command; and the duty, therefore, of all nations is to develop the individual intelligence of each combatant, and render him independent of officers in time of need."

So I am, in this respect, in good company. The Minister of War in Holland, where service is only for one year, told me that he was about to bring in a Bill reducing it to eight months. In my lecture I said that even for artillerymen three months' training was sufficient. That was the result of an enquiry made by me in France. In England a high authority, who was kind enough to give me his opinion, thought that an artillerist could be trained in from seven to eight months. Here I have two opinions: the French opinion putting it at three months, and the English opinion putting it at from seven to eight months. It is possible, therefore, that in English training superfluous instruction is given in some respects. In general, I am quite convinced that training might be a great deal shortened, especially if begun in the schools, and otherwise practised as in Switzerland.

With regard to Sir John Colomb's interesting remarks, I should like also to say a few words. Sir John Colomb says that I am mistaken in thinking that you are about to carry out radical reforms in your Army,

and he points out that the changes have much less significance. I am very grateful for Sir John Colomb's correction. My error arose from the fact that during the introduction of the Army Bill remarks were made by Mr. Brodrick which implied that the British Government intended to bring in a project for conscription, if the present reforms failed to secure an adequate number of men. As to the reference to interference in a Continental war, one of your Ministers spoke recently of the increase of the Army as being partly due to Continental obligations. But this point has no bearing upon my arguments, and I shall not therefore say anything more about it. In Sir John Colomb's discourse are found also some remarks as to the difference between an European war and that which has taken place in South Africa, chiefly in regard to the relationship of area operated on to the force employed. In Europe we shall have millions of men, while in South Africa only 350,000 men were in the field, I dealt with this question at length in my first lecture, and again in my reply to Admiral Bowden-Smith. I shall, therefore, only say a few words. It is quite true that the forces in Europe will be nearly thirty times greater; but how this would operate I pointed out. It would result in difficulties of leading, manœuvring, and provisioning, and would lead to economic perturbations. But, as concerns tactics in battle, the number plays no rôle. The millions will be broken up into many armies; and, therefore, it is quite possible to draw lessons from the experience of 350,000.

Sir John's remark that the difficulties in South Africa are analogous to the commonplace difficulty of finding needles in a bundle of hay does not seem to me altogether just. At the beginning of the war and up till the beginning of the guerilla warfare the Boers were massed in limited districts, and their invisibility did not arise from the area of the country, but from new conditions of battle. He also thinks that history tells against my argument as to the impossibility of war, and he points out that though such ideas have often before been held in the course of the present century they have been always disappointed.

But in my lecture I gave reasons for believing that the lessons of military history must be changed to-day, and as I have heard no refutation of my arguments I must continue to hold them. It is quite true that hopes of peace in the past have been disappointed, but these hopes were very different from mine. They were based on humanitarian sentiment, and they relied upon human progress in morals to prevent war breaking out. My argument is a very different one. I know that, unhappily, war may break out any day, and I have no delusions on that point. When I say that war is practically impossible on the Continent of Europe, it is not because I put any faith in the desire for peace. The basis of my argument is that under the military, social, and economic conditions of Europe at the present day, though it is quite possible that war may break out, it is almost impossible for it to be waged successfully; and that in any case, it must be waged in an entirely different way from that of the past. But with this latter point I think Sir John Colomb agrees.

Sir John Colomb refers to the question of invasion, and he asks, "If frontal attack is impossible, how are you going to attempt to land a great invading army on boats and rafts?" Sir John says it is impossible, and I entirely agree with him, and have always said that there is no danger whatever of a successful invasion of England. He in turn agrees with me that the great difficulty in England would be the maintenance of her food supply. But he does not think that the problem is hopeless, and he makes the very interesting remark that in maritime war a great moral effect is produced by a superior force. He says:-"It is the possession of sufficient battle-ships, cruisers, and observer forces, exercised by a superior force, that produces the moral effect that keeps the enemy in port."

I should like to give my reasons why I take the liberty of differing from such a high authority as Sir John Colomb. I agree entirely as to the moral effect of superior naval forces. The question is, How will the moral effect operate? My own belief is that it will operate very strongly in keeping the enemy's battle-ships in port, and making him refuse to risk battle. But the question of protection of commerce is a very different matter. Because when dealing with a superior force the weaker side must do something, otherwise there would be no use at all in having a fleet that was not superior to the enemy's. We know very well that the British Fleet is superior. But it is for that reason that France, Germany, Russia, and Italy pay every year millions in subventioning commercial ships which may be turned into cruisers. Does Sir John Colomb imagine for a moment that these will remain in port owing to any moral superiority of the British? I admit, of course, that the British Fleet can destroy them, but it will be only gradually. And surely it is in this very war upon commerce that the weaker side will seek his recompense. The war upon commerce will be the result of inferiority -it will be the weaker side's protest against the superiority of the stronger. It is owing to

this very fact of the moral superiority of a greater fleet that commerce destruction will be begun. The moral superiority of larger forces also exists on land. But when the larger armies have established their superiority, what do the weaker do? They employ their energy not in fighting, but in capturing convoys and small detachments. It is precisely so at sea. It is because the weaker side cannot fight that he turns to a war upon commerce. Moreover, the moral advantage of a larger fleet will not be feared by a nation possessed of swift and powerful cruisers against which battle-ships are useless. In such a war speed determines everything, and in a war of commerce a weak nation which can put upon the seas a single cruiser which can steam one knot quicker than any of the enemy's ships may come out victorious. Therefore, with all respect to Sir John Colomb's high authority, I must retain my opinion that the protection of England's commerce will present great difficulties in time of war.

Sir John Colomb's optimism seems to me extraordinary, and I can only ask myself how such an eminent man with such a penetrating mind as his can believe it possible to avoid the catastrophes which threaten England in case of war, merely by means of a greater or less number of war-ships. Do we not here witness the morbid phenomenon which the German Chancellor Caprivi characterised as the *folie des nombres en fait d'armements*? In view of such optimism, it is not improbable that if war were to break out to-day we should find the same phenomenon as was witnessed at the beginning of the South African War when it was believed that some £10,000,000 and 70,000 men could conclude the war. I ask Sir John Colomb to excuse the comparison, which of course can only be justified to a certain point, as Sir John himself says that the real danger of England and of the British possessions lies on the sea, in the economical question, the protection of commerce in time of war. But we have had infinitely greater warning than we had at the beginning of the Transvaal War. We see another distinguished officer, Admiral Sir N. Bowden-Smith expressing the apprehension that the fear of popular movements owing to the rise in prices is not without foundation. We have had a Committee, thanks to the initiative of Mr. Yerburgh, M.P., which has undertaken a serious study of the question, and which came to the conclusion that it was indispensable to have depôts of Governmental grain to feed the population. Captain Murray in his lecture shows how narrow are the limits of the purchasing power of the poor, and how great is the number who would have to be supported by the State, and he proposes, in order to avoid tremendous catastrophes, to provide stores of provisions in time of peace; and in time of war the establishment of a state of siege in the whole Kingdom which would make it possible to feed the population by the distribution of sufficient food to prevent death from starvation. In the discussion which took place on this lecture, a discussion in which sailors, soldiers, economists, statisticians, and manufacturers of eminence, took part, it was certainly shown that the position would be most critical. Captain Murray thinks that England's food supply might possibly last for four or five months, while other experts, like Mr. Seton-Karr, M.P., think this is too favourable a view. But the question is not merely how much food is to be found in England, France, or Germany, at any one time, but also whether the rise in price which would take place on the outbreak of war would not put that food entirely out of reach of nine-tenths of the population. Mr. Seton-Karr reminds us that by the artificial measures of a single brain - that of Mr. Leiter - the price of grain in this country was put up from 25s. to 40s. per quarter, and he well asks what would happen when war conditions begin to operate. The answer to that question is given by Mr. Seton-Karr, who cites the case of the Spanish-American War.

"When that war broke out, Spain never raised a finger to interfere with any American ship, never attempted it in any way, never sent a torpedo-boat or a tug-boat out. But in the early days of the war there was one large American sailing ship, the 'Shenandoah,' with, I think, 30,000 centals of wheat consigned to Liverpool. She was on her way from San Francisco, and was somewhere off Cape Clear soon after war was declared. There was a Spanish torpedo-boat damaged by a collision or gale, which had put into Haulbowline to be repaired, where she was repaired by our people. Well, the 'Shenandoah' was something like two days overdue in Liverpool, which everyone knows is nothing for a sailing ship. The rumour was started in Liverpool that she had been picked up by this torpedo-boat, which was well known was comfortably in dock at Haulbowline unable to move. What was the result? In one afternoon the price of corn in Liverpool jumped up nearly 50 per cent.

"Such was the effect of a mere impossible rumour. What would the effect have been if the 'Shenandoah' had really been captured? And what would the effect be in a future war, when not one, but every grain ship crossing the Atlantic, was in danger of capture?"

The lecture of Captain Murray and the discussion which followed give lessons not only for England but for nearly all the world, for the conditions of England in regard to food supply are reproduced to a large degree in all the countries of Western Europe, and it is not only England which is threatened with famine as the result of a naval war and land war combined. I pointed this out in my book years ago, and now I have only to say that nearly every point stated in Captain Murray's discussion, such as insufficiency of home production, smallness of store of food at any one time, great rise of prices in time of war, and probable result in inciting to disorder the industrial populations, will apply also in the case of a French and German War (and this even though oversea communication should be maintained), owing to speculation, difficulties of transport, and lack of men and horses for home production, The fact that France and Germany have land as well as sea communications has the effect of putting this fact into the background in this country; yet it is true that both these nations in time of war would be as absolutely dependent on oversea communications as England. Russia and Austria are the only great Continental countries which produce a superfluity of grain. Now in time of war Germany will get no grain from Russia, and hardly any from Austria, and France can only get it by sea. In other words, both France and Germany are dependent on sea communications for their food supply, and their position differs from that of England only by the fact that England's industrial population is somewhat larger, and her products of grain smaller. It is a difference of degree and not of kind.

But this consideration gives to Captain Murray's lecture an enormous importance. For when I read his paper I found that practically all the members of the Institution who discussed it, agreed that it would be quite impossible to prevent scarcity of grain and an enormous rise in price. Yet England's fleet is the largest and best in the world. What then would be the case of Germany in a war with France and Russia? She has a narrow seaboard and a small number of ports, and against her would be a French fleet on one side and a Russian fleet on the other. If England with her enormous fleet, her immense seaboard, numberless ports, and great merchant marine would be exposed to famine owing to a rise of price in time of war, would not Germany be in a much worse position? And would not her position be complicated still further by the fact that the tillers of the ground, and the artisans and labourers would be summoned to the colours, a fact which has not parallel in a British naval war?

These are the reasons why I must retain my opinion as to the economic perturbations which would be the result of a great war.

If I were to sum up all the objections which have been brought against the contentions in my lectures, I could only say that their effect does not make any change in my views. This, in spite of the measures taken to give opportunity for argument, such as the distribution of the two lectures to the members of the Institution, and also the distribution of *a questionnaire*, in which all the main points were set plainly forth. I do not think the essential questions have been, touched.

I would repeat again, in order to avoid misunderstanding, that my aim has been purely scientific and in no way political; the problem of the prolongation of the South African War, its probable results, and the policy to be adopted have been as far as possible avoided. And that my work, thanks to the, great hospitality which you have given me, has not been useless is proved by the zeal which certain partisan or interested German journals have displayed in distorting the facts of the Transvaal War, in order to prevent the lesson being drawn that a war between the Great Powers would be disastrous and sterile. Every explanation of the difficulties arising from the new conditions of war is represented as arising from animosity and hatred. We are here face to face with a very serious symptom, and in the interests of humanity and of England, it is very desirable to find a remedy. This can be done by you, if you throw light on the changes which have taken place in the conduct of war, by setting the lesson before the eyes of everyone. I ask your indulgence for a moment longer in allowing me to explain what I mean by this.

From the discussion which has taken place, we saw that each member stood primarily for the defence of his own arm. This is, of course, most useful from the specialist point of view; but it suggests other reflections, that is -how difficult it is to find anyone who will take a comprehensive view of the whole subject of war, not merely in regard to the co-relationship of the various arms, in the strict sense of the word, but also in relation to those financial and economic resources, without which the continuation of a

war long enough to obtain decisive results would be impossible. I think myself, and have long thought, that the *ensemble* and philosophy of war is a subject in which every nation needs to be educated. The political histories taught to children, and the military histories studied by specialists, throw no light on this problem. Nowhere do we find any clear notions of what war is as a social phenomenon, or even in the *ensemble* of its details. But war is not merely a series of military operations, but a great social appearance which has its ramifications in every branch of life, and the consequences of which are every day being absorbed as integral parts of the history and evolution of every nation.

Now, to deal with this science no method has ever been created. In England, and elsewhere, we find museums, such as the interesting museum attached to this Institution, which deal either partly or wholly with war. But these museums are mainly historical; their chief object is to preserve objects of accidental interest, and they neglect altogether the exposition of war and its social phenomena to-day. It is the same in military exhibitions. In London at the present time you have two of these, but both are spectacular and formed for amusement and to satisfy curiosity. Neither from museums nor from exhibitions of this kind can you learn anything as to what war was in the past compared with what it is to-day. I have studied in many museums and exhibitions, and I have always been struck by the fact that, as if intentionally, every object showing the changes which have taken place in war has been, so to say, hidden, even when chronological collections are shown. A soldier perhaps, by sacrificing much time may extract from them a little light; but the ordinary mortal, never. Once only, at Buda-Pesth during the Exhibition, I saw a small military section which dealt with the subject in a scientific light, and my own experience of it was that from this collection it was possible to learn more in a few hours than from the study of books for years. I watched the impression created upon the general public and saw what great value such optical teaching had for the cause of peace. That is what is wanted. Its use is not only for the ordinary public, but for statesmen also.

We have heard here the complaint that statesmen refuse to grant credits for the most indispensable military needs. But that naturally arises from the fact that money is every day demanded for fresh improvements which cost millions: the argument being always the same, absolute necessity. Before these credits are exhausted more money is demanded for throwing into the gulf - a new invention, a new improvement must replace the old. But if the elements of the mechanism of war could be easily studied, many of the frivolities, let me say many of the manias, which cost millions, would be avoided. Even for soldiers such an institution would be of great use. The military man is an artillerist, an infantryman, a cavalryman, an engineer, but the *ensemble* escapes him. The science of war changes every year. The higher grades of officers learnt the elements of the military art long ago, a colonel perhaps 25 years, a general 35 years ago. Do they keep their knowledge up to date; have they time for it; and can they do it, as they often have to, only by the dead letter of books? The younger officers have learnt more, and have studied models in the schools. But they dare not give an expression of opinion, which would not help them in their careers, but must keep silence. That is why even for soldiers a lesson might not be, without use. But above all, what we want is to show to soldiers and civilians something of war as a whole, with a representation of its technical, economic, and financial sides. I may say that my conviction as to the importance of such study is in no way new. After the beginning of the South African War I declared in the *Daily Telegraph* that the lessons which the war would teach would be of the first importance, and that as they would probably be distorted, it would be useful for the British Government to send to South Africa trained specialists, who would have nothing to do but to study the phenomena of war on the spot, and afterwards draw up reports from which a general conclusion could be made; and if the Government did this, I expressed my willingness to meet part of the expenses.

Now, if such a measure had been taken, we should have had much better and more ordered material than we have to-day; and a representation of the South African war in a scientific and popular manner, which would help, among other things, to refute the accusations of incapacity brought against the British, would present no difficulties. You are all, though soldiers, friends of peace, and therefore I have no hesitation in saying to you that such a course of popular study would be of immense value in preventing the outbreak of wars. As Lord Salisbury said, it is no longer the Governments, but the peoples, who make wars. But if it was necessary that Governments in the days when they made wars should know something about war, and did they ever know enough-witness the French Government in 1870, the Russian Government in 1877, and the British Government in 1899? -surely it is also necessary that the people

who now decide the issue should be at least equally instructed.

The object-lesson created by a scientific museum of war would prove of great value for the world's peace, and also for England. But another motive not of less importance pleads for the creation of such an institution in England; that is, that it would to some extent teach civilians something of the art of war. Whatever else be disputed, it cannot be denied that the Transvaal War shows what excellent soldiers civilians may prove themselves to be. We all know what the Boers did, and we see that they showed their superiority even in the scientific side of war, such as entrenchments and fortifications. This is not because the Boers had no training, but because each used his individual intellect. Yet the Boers had their defects. The United States attaché, Captain Reichmann, said that although still fine shots, the Boers are no longer such excellent marksmen as of old. They are still hunters rather than soldiers, and will not hold a position to the last. Their most serious defect was the lack of military discipline. When a movement was proposed which was not agreeable to the men, no officer would make a move, consequently many well-planned affairs were ruined. Politics play a great part in the election of officers. Inferior officers act on their own initiative to a degree which almost passes belief.

England might have a national army in which the defects of the Boers would be corrected; but their good points, individual initiative, and capacity for adaptation to new exigencies of tactics, preserved. We are told that at the schools the methods are right, but it is necessary very often to instruct the instructors; and it is necessary to awaken public interest in the science of war. For these reasons an institution such as I have sketched is indispensable for England. The Government itself might create it, but there is reason to fear that this might result in the distortion of the technical side and the suppression of the economic side. It seems to me, therefore, that the Royal United Service Institution might take the initiative in creating the institution of which I speak. I do not believe that there would be much difficulty or any risk. You would find many men who would labour willingly in such a work. I have already myself taken the initiative abroad by founding a Museum of Peace and War in Lucerne. For years past I have been engaged in the study of how best to present at once scientifically and simply, all the questions involved in war. The materials are ready, and you may see on these walls some specimens which show the general idea. For the special section, which is a representation of the differences between the phenomena of the South African War and those of former wars, I have elaborated a programme which I propose somewhere to publish. There may be defects in this, but *la critique est aisée*, and you could easily correct and improve my work. But in any event you would do much better than I; and particularly in regard to the South African War you are in the best possible circumstances. The high position occupied by your Institution is an especial reason why the initiative might be taken by you. My own belief is that the execution of such a project would not be very costly, and I calculate that some £10,000 would cover the expenses, especially if your Government would co-operate by lending objects and new instruments of warfare, which could be returned, if required, at a moment's notice. In regard to the locality, the building of the Royal United Service Institution would be admirable if it were not that enough space could not be obtained, for it would be necessary to represent on a large enough scale different methods of warfare, such as entrenchments. My own belief is that with a small entrance fee, a fair interest would be paid upon the capital, and a further profit brought in which could be employed towards increasing the stock of objects, and keeping the Museum up to date, such being an essential feature. In conclusion, I may say that if such a Museum is founded, I should be very glad to present copies of all that I have had made for the Lucerne Museum. I need not say that controversial questions should be avoided, the only object being to show war as it has been in the past and as it is to-day.

I will only add a few words for those who think that this proposal is not in accordance with my own desire, which is to avoid the outbreak of war, and to find other means to solve the disputes of nations. What I should say is that the greatest enemy of these peaceful tendencies is ignorance, and an institution with the objects of which I have spoken would be the best means of combating it.

The CHAIRMAN (Major-General Sir J. F. Maurice): -In accordance with our usual practice, it is now my duty to sum up the discussion, and to say a few words of my own to draw it to a conclusion. I quite agree with M. de Bloch as to the great importance which is to be attached to the first speech which was made to us by Colonel Downing, speaking as an artillery officer; because, as M. de Bloch says, the possibility of the attack of infantry upon infantry must necessarily be largely determined by the question whether

artillery is or is not able to keep down the fire of the defenders. So much is that the case, that I think M. de Bloch will agree that if the proposition put forward by Colonel Downing was "proved, M. de Bloch's case would break down, because his whole position is that the defence of infantry against infantry has become as powerful, and artillery has become so ineffective in acting against infantry, that practically the defence is supreme. Nevertheless, I do not think that Colonel Downing has taken the strongest illustrations from the war that he might have done. His allusion was to a particular incident which he had himself seen as an illustration of this proposition that artillery is able to keep down the fire of infantry as a preparation for attack. A much stronger instance that might have been taken was that of Pieter's Hill, where, not by the saying of the artillery at all, but by the common consent of the Army of Natal, "Ladysmith was relieved in twenty minutes by the fire of ninety guns," which simply meant that the infantry fire of the defence was so kept down that that magnificent attack of the infantry-of which we all know- could be carried out. Therefore, as regards the question immediately at issue that makes a very much stronger point than the minor incident of Reitfontein to which M. de Bloch objected. But, to my mind, a still stronger case is that of Paardeberg itself, because it illustrates precisely the misunderstanding about the use of artillery in such matters, which is apt to arise. It is quite true that the artillery at Paardeberg produced exceedingly small loss upon the Boers, immediately by its own fire; but what the artillery did do was to keep them down in their trenches, enabling the enclosure of the infantry to be made at such close range round them as ultimately to produce the surrender which was fatal to the Boers. I quite admit all that M. de Bloch says as to the difficulty of artillery acting against trenches under such circumstances, but if the result is that you shut up men like rats in a hole, it is about as good to you as if you killed them on the spot, as far as the effect in war is concerned. That brings me immediately to Sir Howard Vincent's speech. I hope he will not think it unkind of me if I say that its value almost entirely depends upon the assumption that what Sir Howard Vincent did not know before the beginning of the war was not knowledge. That is an assumption which I might admit, considering the great pains and care which Sir Howard Vincent has taken to inform himself, but for one little incident which I must now make public. Sir Howard Vincent a year ago, at the time to which M. de Bloch has alluded, put forward identically word for word the same challenge that he did at the lecture here the other day. He said, "I should very much like that those people who say they knew these things before the war would produce the books in which it was said before the war that the losses from artillery would be as small as we have found them to be." Ten minutes after that lecture was delivered I went up with Sir Howard Vincent into an upper room here, and I put into Sir Howard Vincent's hands an extract from a volume as to which I venture to say that, if Sir Howard Vincent had never heard of its existence, he was almost the only man in these islands that had not done so. Thanks to the enterprise of the *Times* and the *Daily Mail*, there is one voluminous work which it must have been very difficult for anybody not to have been aware of. I suppose you each of you have had, as I have, some advertisement of the *Encyclopædia Britannica* before your eyes nearly every day during the course of the last year. At all events, a year ago I put into Sir Howard Vincent's hands a passage in the article "War" in that book, written at least ten years ago, in which it was urged as a conclusion from all our previous experience that the result of artillery fire, despite its enormous development, would be to produce comparatively few direct losses in battle, that is to say, that when you add them up at the end of the day, the dead reckoned to the guns would be comparatively few, not because artillery does not produce deadly effects where it strikes, but because the great ranges at which it fires enables an enemy to avoid the area of its destructive effect. Notwithstanding that, the argument, as you may see it if you please, was that that did not alter the fact that the power of artillery was greater than it ever had been in preparing the way for the action of infantry. Provided always you are able, to keep down the fire of the enemy, it does not matter to you for military purposes whether you then kill them or do not. You want to seize a certain position, and in preparing the way for that artillery is just as well able to do its work as at any time. I put that into Sir Howard Vincent's hands to bear out my statement that that was there predicted at least ten years ago, and was a then accepted fact. I do not think, therefore, that it was fairly open to him to put forward his challenge again a year afterwards. I think I could, if I may venture to say so, go through almost all the forty points to which Sir Howard Vincent has alluded and show that the same principle applies. They are not new, and M. de Bloch does not claim that they are so. He has quoted from able soldiers of all nations proof that these things had been foreseen, and that the war has justified the conclusions which those who had carefully looked into the matter had previously drawn. I honestly know of no single circumstance that has occurred in this war which does not stand exactly in the same relation to previous experience as this question of artillery. The general public thought that artillery must kill a great many men in battle, and the result has been contrary to their expectation; but those who had gone a

little below the surface did not think so. They did think, nevertheless, that artillery would produce that effect which is of importance - that if the Germans were going to break across a position, they would do it by an overwhelming artillery fire and by turning movements in correspondence therewith. The question of the value of the deductions which M. de Bloch has drawn from the great catena of military authorities whom he has consulted is so important, that I shall interrupt the course in which I am following the different speeches, in order to turn to an interesting incident in the past history of this institution which will throw a rather peculiar light upon the whole subject. I have before me a copy of the JOURNAL of the United Service Institution thirty years old. It contains a lecture by one of the ablest men we had in those days, a professor of fortification in the Staff College, "On the advantage which the new arms of precision give to the defence over the attack." That was just previous to the great Franco-German War of 1870. It was a very ably drawn-up anticipation of very much what did happen in the 1870 campaign as far as the actual effect of weapons was concerned. It so happened that there was present at that lecture a civilian, not nearly so eminent a man as the distinguished lecturer who has done us the honour of coming here, but one who was not unknown in his day, Mr. Edwin Chadwick, C.B. He drew from that lecture a conclusion exactly identical to the one which M. de Bloch has drawn from his vast collection of soldiers' statements about war - that the defence of a great country was then so easy, that it was a crime for France to maintain so many soldiers as she then did, because 100,000 soldiers, with the assistance which her population would certainly give her, were so amply sufficient for her defence that it could only be for the purpose of aggression that Louis Napoleon was then maintaining the vast Army which he had. Of course, it takes some time for our papers to circulate at the Institution; people have to correct their speeches; and, as a result, that lecture, which was given in the year 1870, in a time of profound peace, did not reach the hands of the members of the Institution till after the date of the battle of Sedan; by which date the whole of that enormously too-powerful Army was virtually *hors de combat*, and the Germans were marching irresistibly upon Paris. Mr. Edwin Chadwick did just what M. de Bloch has done. He took the words of soldiers about detailed incidents of war under its then conditions. In the main, the statements he had quoted proved to be true and accurate. He deduced from them the false conclusion that France was enormously over-strong just immediately before the time when she was crushed within three months under the heel of Germany. Therefore I think it is possible that in any studies that may be made in that sort of way - which have been so admirably done by M. de Bloch, these which are so valuable in their extraction of the thoughts of the ablest soldiers of the time - it is just possible that a somewhat similar miscalculation may be made by M. de Bloch. I quite admit with him that things have enormously changed since those days, that the development of weapons has been even greater between 1870 and the present day than it was between Waterloo and 1870; but if it was possible for an extremely able civilian to extract from the conclusions of soldiers, in themselves correct, a statement so completely erroneous as it was immediately proved in practice to be, I think it is just possible that M. de Bloch's use of the soldiers' language may equally lead up to a conclusion which will break down on trial in war. I think the error lies largely in the same misunderstanding; for what happened in that case has, I think, been proved to have happened in the South African War. The reason why the Army in France in 1870 passed almost to the last man, the last horse, and the last gun into captivity in Germany, was that the invading Army made use of the increased power locally of the defensive. By means of it they encompassed the French Army in Metz and Sedan in a ring through which the French could not break. In other words, that enormous power of the defence was by the skill of von Moltke, turned into one of the most effective powers for the conquest of the country that could possibly be devised. Similarly, the skill which Lord Roberts displayed in his great march upon Pretoria lay in the mode in which he utilised that enormous power of the defensive of which M. de Bloch speaks. He saw that in the case of an enemy then trusting wholly to the defensive he could safely leave men at twenty paces distance to hold back the Boers. That enabled him to give a vast extension to his force, and gave him an over-surplus of troops for throwing round on the Hanks and so out-manœuvring the Boers. Therefore, I think the conclusion is a fair one, that with a proper application to circumstances in the great struggles of nations, the tactical difficulties of attack may be turned to the advantage of invasion under the present conditions as they were turned in the past, but in an enhanced degree. I return now to the speeches. I leave for a moment Sir Nathaniel Bowden-Smith's most valuable and important speech, because to my mind the most striking thing that he said touches the crux of the whole question; but as it lies outside of my immediate tactical subject, I venture to pass on to Colonel Graves, who dealt with the cavalry. All that M. de Bloch has said may be perfectly true as regards some of the detail of the criticism that he has offered in reply to Colonel Graves, but I think we cannot, any, of us, forget the cry of indignation that was raised against the expression "dismounted men

preferred." There has been so strong a feeling throughout the country that mounted men were a necessity, that I think there are a good many of us who are inclined to agree with Colonel Graves that had 70,000 mounted men been sent out to South Africa in the earlier stages of the war, we should have had a very different scene from what we have had in the actual war. I may venture also to say that two of the most brilliant episodes - I do not think they were those which Colonel Graves mentioned - of the war were actual cavalry charges, the one that of General French in the march to relieve Kimberley, which was a decision of the moment, quite as completely a sudden cavalry move as any that was ever made in war, in which he broke through the Boers and succeeded in forcing his way when nothing but a cavalry charge would have done it; and the other, curiously enough, on the opposite side by De Wet himself, who, though he had no proper cavalry, yet did use his men as cavalry in the proper sense of the term at the time when he broke through all our toils thrown completely round him, and when we thought we had him completely netted, did, by an absolute charge, riding as hard as he could go, get right through our lines. Nor can we, any of us, forget how during that anxious time which preceded the arrival of Lord Roberts in South Africa, it was the news which we received from General French and his cavalry force round Colesberg which alone relieved the gloom. I am, therefore, from these experiences not inclined to think that, even with regard to those parts of the cavalry action which are most doubtful, it has yet been proved that the day of cavalry is gone. It is to be remembered that very much the same conclusion that the day of cavalry was over, was drawn after the 1870 campaign, and that as a result of it at the end of the war von Moltke enormously increased the German cavalry. Therefore, I think, that we should not be in too great a hurry to accept the conclusions of the lecturer as to the incapacity for their proper work of either artillery or cavalry. A question was raised, both by Colonel Graves and by Sir John Colomb, which may be summarised as that of the four-pound loaf. I remember, and there must be a good many people in this room who also remember, a time when Lancashire was starving because all our cotton had been cut off by the blockade of South America, and that Lancashire nobly bore the starvation; she was helped, as she was bound to be, by the rest of England, but not a mob was anywhere found and not a house was robbed because our men had to go short. For my own part, I believe in our people. Where they see that we are engaged in a great cause, their hearts, as they have shown us in this war, are in the right place. I do not therefore believe that we have anything to fear from internal commotion at a time when we are struggling for our existence. Further, I think that the point with regard to the danger of our being starved into surrender has been a good deal too much pressed. No doubt it is one of the difficulties against which we have to provide, and we have not failed to provide against it. There has been a great outcry in some quarters as to our shore fortifications - I am afraid I shall not carry Sir John Colomb with me in saying so - but as a matter of fact, every fortification that has been made on land within any time that I can remember, has been made on the advice of the Admiralty, not of the War Office. That is especially true of the two great fortified ports in Ireland at Lough Swilly and Berehaven. They were designed as harbours of refuge for swift ships coming across the Atlantic. Many other precautions that I might mention have been taken to meet this very danger. As long as the whole subject is carefully considered and provided for beforehand, I for one cannot doubt that as long as we want food, and are able to pay for it, we shall be able to get it from outside. Sir John Colomb touched on one point which has not been alluded to by M. de Bloch; it is of very considerable importance. He said, that the war in South Africa was not a happy one for M. de Bloch to take as an illustration of the difficulties of a Continental war; because our one difficulty in Africa has been the enormous extent of the area with which we had to deal. It was, as he happily said, the difficulty of hunting for a needle in a bundle of hay. That difficulty will not arise in Europe. The difficulty that M. de Bloch himself foresees, is that the area of Europe - to take a specific instance, the common frontier of France and Germany - is so restricted that in proportion to the enormous number of men that are available for defence or attack, the difficulty will not be that of finding the needle in the bundle of hay, but that of finding room for a needle to penetrate through the mass of fortifications and armed men that will be arrayed. So that the analogies do not apply. With regard to the long period through which the war has continued, I cannot for the life of me see that it has been in any sense whatever due to the development of weapons. The story of the Tyrol or La Vendée, the story of the Austrians in Bosnia, the story of Spain against Napoleon, all show, not that a civil population could then any more than now win against an Army, but that it could for an indefinite time, if it was ready to make the frightful sacrifices which such a resolution entails, delay the final settlement of the war. So far as I am able to judge, I can see no single one condition of the present state of war which does not enhance the difficulties of the civil population and increase the facilities of the dominating Power. The whole power of the railways, of telegraphs, all the enormous necessities of ammunition and of modern weapons in all shapes and forms,

the enormous development of engineering work, the work we have been able to do in South Africa in rebuilding bridges and many similar works, are all in favour of the dominating Power and not of the population. M. de Bloch speaks against himself in that matter when he says that mere armed police will be sufficient to control anything in the nature of an insurrection of the population. If that be so, surely then the mere insurrection of a population will not be a more serious impediment in our times to the march of an Army, than it has always been in all times, so long as the population was ready to fight for its hearths and homes. When M. de Bloch speaks of the cruiser question and quotes the well-known story of "Russia's Hope," we may simply appeal to the elaborate, exhaustive, and most eloquent study which has been given to that subject by Captain Mahan. He has absolutely, as far as I am able to judge, demonstrated that *guerre de course* may be a very inconvenient thing, but as against a dominant naval Power it will be a mere flea-bite as compared with the destruction which the naval Power is able to inflict. I cannot see that there is any answering what he has said on this subject. M. de Bloch says that plains yield better ground for defence than mountains. In so far as that means that it is much more difficult to advance against a fortification across an open plain than up a broken hillside with much dead ground, there is no doubt about it. The whole history of wars tells us that; but mountains do not necessarily relieve you from that difficulty. Our greatest difficulty at Colenso was in the fact of the Boers being on high ground, while we had to advance over an open plain, so that our difficulties in this very war have been of the nature of which M. de Bloch speaks. On the other hand, where you have a very extensive plain as we had in the Orange Free State, it gives facilities for making turning movements such as are decisive in their action. I pass on to that remark of Admiral Bowden-Smith, which, as I think, represents the crux of the whole question. Admiral Bowden-Smith spoke of the causes of war, and he showed that what really determined war is not nice calculation of what we are going to lose or gain, but those terrible differences which occur in the points of view from which different nations regard the same events. I do not think it would be possible to illustrate that more perfectly, or to show that war is certain in the future, than M. de Bloch himself does in that interpretation which he himself puts upon the South African War. He is entirely, most loyally, honestly, and thoroughly convinced, I am quite sure, that the war in South Africa was a pure war of greed. I am just as certain as I am of my own existence that the war in South Africa was one, so far as the view of the English nation as a whole was concerned, of our national existence; one in which we believed, rightly or wrongly, that there were certain English colonists who were being deprived of their just rights, and being treated as pariahs because they were Englishmen, and that it was a question for us either of protecting that colony, or of every colony being lost to us. Whilst I have no power whatever of shaking M. de Bloch's belief that it was a pure war of greed, I want to bring home to you the obvious inference to which that conviction of his leads as to the certainty of future war. It happened to be my duty some years ago to draw out, as an official publication, a study of the origin of all the wars of the past from the year 1700 up to the year 1870, and so far as I know, the story of the origin of every one of those wars is represented by that difference of mind between myself and M. de Bloch. Every one of them arose from the difficulty of men of one nation putting themselves in the place of those of the other. I say that if the nations of Europe believed that we were purely as a predatory nation engaged in this war, they were bound to do everything they could to oppose us; and that we, being absolutely convinced that it was for us a question of "to be or not to be," were bound equally, whatever they might do, to go into it. No risk of such losses as those with which M. de Bloch threatens Europe would have in the least deterred us from entering upon the war. Rather than that we should have deserted our brother Englishmen beyond the seas -

Better the waste Atlantic roll
On them, and us, and ours for evermore.

MILITARISM IN POLITICS, AND LORD ROBERTS ARMY ORGANISATION SCHEME.

Great Britain is painfully passing through one of those severe crises which, in the lives of peoples as of individuals, strike one as being out of all proportion to their apparent causes. A number of undisciplined farmers, varying from 35,000 to 50,000, are draining a vast Empire of its financial resources, its prestige, and its life-blood. The wound indeed is small, but the ichor is fast flowing from it in quantities large enough to arouse concern, if not to justify alarm. This process has now been going on for over two years without stoppage, and there are as yet no signs of a speedy end. How long it will continue no man ventures to say, and no hopeful assurances, however authoritative or emphatic, could any longer bring balm to the heart of the nation. Promises and prognostics, military and ministerial, have fallen into discredit. From the "picnic party" which it appeared to be at first the struggle soon assumed the proportions of a great war - "the greatest which England was ever yet engaged in," some politicians now frankly admit. The General Staff unhesitatingly declared in June, 1899, that 10,000 men would be amply sufficient for the conquest of the Transvaal. As they were speaking of what they could and should have thoroughly understood, the people believed them. But shortly afterwards 70,000 troops were found to be requisite, and when making the demand the same professional body was unanimous in affirming that an army of this strength would easily trample out all resistance. They confessed that their first estimate was very incorrect; to err, however, is human. They had since been enlightened by a thorough study of the facts, and their forecast would soon be realised by happy events. And the people trusted them again. But the results were as unfortunate as before. Thereupon they increased their demands anew, until the troops despatched amounted to about 300,000 in all, and like the two daughters of the leech in the Bible the cry is still "give, give." The mistakes made as to the probable duration and cost of the war were correspondingly great. At first ten million pounds sterling was mentioned and allotted, but over two hundred millions have already been expended, and the bottom has not yet been touched. Nor was it only in forecasting the future that the military authorities led the nation astray. They proved equally incapable of reading aright the events of the past and the present. Several times have they publicly declared that the war was over, and the final flickering out of its lurid flames was officially made the basis of Lord Kitchener's celebrated proclamation calling upon the remnants of the straggling rebels to surrender in September. Yet the smouldering embers have since blazed forth anew with a consuming force as terrible as ever, and the only comfort which the Prime Minister can offer is to ask the people to believe that while all the concrete details of the campaign are disheartening, their general trend is eminently satisfactory. They have merely to pay the increasing taxation and supply the men, and the military authorities may be safely trusted to do the rest. The public, however, vaguely feels that exceptional diseases need uncommon remedies, and until these are applied the general depression must continue.

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Affliction renders individuals amenable to kindly influences to which robust health offered no inlet. Upon organised peoples a great national crisis has an analogous effect. Seeing the failure of attempt after attempt to treat their symptoms, which become aggravated instead of assuaged, they are sometimes willing to give ear to the suggestions of those who would uproot the causes instead of worrying about mere transitory effects, and advisers are emboldened to come forward who would otherwise have made no sign. It is consciousness of this change of mood that urges me to raise my voice at the present conjuncture, not indeed in the hope that my remarks will be accepted on trust, but that they will be duly weighed, and acted upon or set aside on their intrinsic merits. It is the voice of a warm friend of that great British nation whose prosperity is identical with the spread of culture, and whose interests are interwoven with the cause of peace. It is furthermore the same voice which uttered wholesome, if unpalatable, warnings at a time when prophets of evil had, to put it mildly, no chance of a hearing; and the lamentable fact that the predictions which were then drowned in wild shouts of jubilee have since been amply fulfilled, may possibly contribute to get a hearing for well-meant words which might otherwise fall upon deaf ears.

The message I bring is not the dream of a sentimental Utopist. It is based upon a frank recognition of hard facts and national needs and interests. I admit that force has ever been one of the chief factors of all societies, and that in one form or another it will long continue to play an important part in keeping their unruly members within reasonable bounds. The great ideal of the Twentieth Century, however, is to reduce it to the position of a steady glowing heat, whose effect shall be constant, uniform, beneficial, and to hinder volcanic outbursts which in a month or a week would burn the work of generations to ashes. Within the frontiers of each nation the force behind the law seldom assumes its crudest shape, and is generally represented by symbols. A policeman, for instance, tells an individual to follow him to prison, and the man obeys, the power that looms behind the blue uniform being taken as exercised. But in most of the serious dealings between nation and nation brute force is still the *ultima ratio*. Now the tendency of contemporary civilisation is to do for nations what has already been accomplished for individuals, to make it possible for them to go to law with each other instead of going to war, to subordinate passion to argument, to raise right above might.

This ideal has been laughed to scorn as Utopian. But such has ever been the fate, at first, of all the new ideas and projects on which our modern culture is built up, from the days when Philolaus' theory of the heavens was ridiculed even by Plato, to be established by Copernicus, down to recent times, when Stephenson's horseless carriages were sneered at by an enlightened press and tabooed by municipal councils. The practical and the Utopian are often divided by no more formidable barrier than the individual intelligence or the national will. To abolish duelling was at one time a visionary project, even in England; it is still so in the Germany of to-day. To get rid of war, though much less easy, is no more impossible than was the abolition of duelling or of slavery. Indeed, I hold that it will soon have become less difficult, because, will they, nill they,

nations will be compelled to abandon it as a recognised means of settling disputes. The only question is whether they will admit the facts and draw the practical lessons from them before or after events will have deprived them of the freedom of choice.

"Vested interests" are the main obstacles in the way: the slave-owners in the one instance, the military class in the other. For ages war has been idealised, heroism bought and sold cheap, chivalry galvanised into the simulacrum of life, and a caste established which is vitally interested in the maintenance of the reign of force. In England that caste is ordinarily less powerful than elsewhere. Many of its representatives still feel their solidarity with the bulk of the people more keenly than their attachment to class. But even here, in critical moments, it assumes, like the old Roman Dictator, full power to run the ship of State, without anything like full responsibility. It plays the rôle of pilot during the storm, and the captain sinks to the rank of a subordinate, or even an impotent onlooker. And it is from this military caste that has emanated all the opposition hitherto offered to the strenuous endeavours made to hold in leash the dogs of war, and the judgment of its members has been so strangely warped by their feelings that it plays them false in their preparations before the combat begins, and in their plans of campaign when it has already broken out. For the data which would have enabled them to take proper precautions for the concrete struggle are the same which make it clear that hostilities on a large scale no longer mean harm or gain to the few, but utter disaster to all. And to that they shut their eyes. Thus the ruinous race in armaments, the unbearable burden of taxation, the over-production resorted to by industry in order to meet it, the commercial and industrial crises which are thereby provoked, the desire to handseil those arms with blood, if not in Europe then elsewhere, the deliberate thwarting of the objects of the Hague Conference, the China Expedition, with its monstrous accompaniments, the grotesque mishaps of the Transvaal War, and now the costly and fantastic plan of Army Reorganisation, are one and all the handiwork of the military caste. Nor is the cycle of their achievements ended: the race for naval armaments is but beginning; conscription looms, dark and distant as yet, but no longer a monstrous phantasm on the horizon of the future; and taxation increases by periodic leaps and bounds. It is not in the name of a humanitarian ideal only that this costly course is to be deprecated - the interests of the Empire, the needs of national defence, condemn it.

To blame the military authorities of this or any other country is neither my province nor my wish, but only to compare the means which they employ with the objects they profess to aim at, and to contrast the ends which are alone feasible under the new conditions with both. Their intentions are, doubtless, excellent; the pity is that terrestrial empires cannot be paved therewith. They are patriotic according to their lights, but their lights are garish and insufficient. What I am concerned to point out is that unless nations can bring themselves to see the nature of the obstacles between them and prosperity in peace, and between their armies and self-protection in war-so far as it is still possible-and to remove them when discerned, no such military measures as at present contemplated will save them from untold misery. The average citizen whose book of contemporary history is the daily news-paper has no idea how widespread are the ramifications of militarism, how far-reaching its tentacles, how mischievous its action. It

is not only when hostilities are about to be begun that the military advisers who sway the judgment of statesmen beguile themselves and the people into belittling the risks, the hindrances, the cost in men and money of a "little expedition" or a big war. Even in peace a sword is often flung into the trembling balance of diplomacy, with a cry far more ominous than Brennus' *voe victis!*

I have a vivid recollection of a very interesting conversation which I once had with General Rosenbach, the late Governor of Turkistan, on the undue influence which military men often wield upon the course of politics. I asked him whether it was true that officers, especially in districts distant from the political centre, can and do make wild dashes through the meshes of the diplomatic net, in order to create "accomplished facts," and to merit well of the Fatherland. General Rosenbach gave an emphatic reply in the affirmative, and by way of illustration told me an experience of his own. When he had been appointed to the post of Governor he called on Prince Gortshakoff, then Minister of Foreign Affairs and Chancellor of the Empire. "Now, above all things," said this dignitary to the General, "please steer clear of entanglements. Keep in smooth waters. The Emperor (Alexander II.), who is intent on internal reforms, bitterly complained to me one day of the misunderstandings and troubles that were constantly cropping up on the Asiatic frontiers, necessitating military expeditions. I told him how I felt about the matter: 'Sire,' I said, 'I can suggest but one remedy: Bestow all possible decorations and titles upon the Governor-General in advance, warning him, however, that for each new expedition or annexation you will mulct him by withdrawing one. I warrant your Majesty there will then be no trouble on the frontiers. Peace will be an evergreen.'" And commenting on the story, General Rosenbach unfolded to me the enormous difficulties he had had to cope with in the impetuosity of his subordinates, ever eager to rush off at a tangent, and without word or warning do doughty deeds. And worst of all, he added, they were nearly always encouraged by the Ministries at St. Petersburg. How many "accomplished facts" which are currently believed to have emerged from the Medean cauldron of diplomacy are really the handiwork of pushing officers in a hurry to help their country and to bring themselves to the fore!

Since that time I have seen many curious chips from the real as well as the supposed workshop of contemporary politics, and I have sometimes sketched for my own edification the outlines of a history written on strictly realistic lines, with the brilliant colouring and the high-sounding phrases left out. Comedy, not history, would be its proper title. But parallel to this comedy runs a tragedy—one of the most terrible among those which mankind naively attribute to Fate. If the student of history were, in business-like fashion, to cast the balance of wars, totting up the physical and moral sufferings of individuals and the moral and material losses of peoples on the one side, and the real advantages which there were no other means of obtaining on the other side, what an eloquent sermon those dry figures would embody! What a disproportion between motive and object, means and end! Take, for instance, the Crimean War. Who reaped any advantage from the appalling sacrifice of men and money it involved? Not England, who was said to have come out with flying colours, for we have it on the best living authority that she "put her money (and men?) on the wrong horse." Not France, for she has been the first to try to undo the web which she then commenced to weave. It

surely was not Russia, seeing that defeat and humiliation were her portion. Ribbons, medals and titles, however, there were not a few, and the men who received them doubtless considered that they at least had gained something by the transaction. But is it for such as these that sanguinary war is to be perpetuated?

If, however, the historian will not turn his searchlight on the shambles of war, he should at least decently decline to describe the sickening sights that meet the eye there in words which would be exaggerated if used of the heroic struggles of the world's greatest benefactors. There are, it is true, realities in life from which sensitive mortals instinctively turn aside, and in this there is nought worthy of blame. But to belaud them, as if they were embodied ideals, is an extreme which lies beyond the Hercules Pillars of truth and morality. In history, more even than in the censorship of the drama, a healthy public opinion ought to insist on some approach being made to a moderate standard of ethics.

In most countries annexation has heretofore been a military rather than a diplomatic game. Unseen by the general public, the man of war imposed his will by creating "accomplished facts," making attractive promises or uttering intimidating prophecies which were afterwards seriously repeated by responsible Ministers, and to the accompaniment of the loud huzzas of a patriotic public the flag was hoisted and unfurled. The details have, of course, been varied, and deputations from the people whose country was to be invaded came and besought the would-be land grabbers to free the modern Andromeda from an odious monster, in the name of Christianity and civilisation. And the nation, seeing and hearing, was convinced. How such deputations are gathered together is a curious and not wholly edifying story.

No wonder experienced statesmen are hardened cynics. One of the greatest of our own days once gave me a memorable account of the slipshod way in which the blood and money of a hardworking people are gamed away. To the story he told me the striking words of the dying Oxenstjerne are far too feeble to furnish a fitting comment. He wound up his narrative by remarking: "The heads of States are but children in judgment, tools in government, mirrors of the opinions of their environment. They are informed that a military expedition is necessary; they believe it. They are told that it is a mere promenade or a picnic; they yearn for it. They are assured that it will bring them prestige, nay, that it will even confer a boon upon the people against whom it is directed; they feel inspired by heaven to carry out the glorious mission. When they afterwards learn that their troops, instead of being welcomed with open arms by the invaded population, are being mowed down by the hundred, they are quieted by the explanation that ambitious demagogues or unscrupulous exploiters of the ill-starred population were at work."

One day, when waiting in the ante-chamber of one of the great ones of the world, I took up an album of Oriental views and portraits which lay on the table, illustrative of the picturesque side of the policy of annexation. I was struck with the fine figures and noble features of the chiefs of the invaded Orientals, nearly all of whom might have posed as models for statues of patriarchs, prophets, philosophers of Old Testament times. But I

was equally struck with the abject hang-dog looks of the base types which formed another group, fellows who might have figured in Lombroso's work on heredity in crime. "Can it be that these pitiable creatures belong to the same race as those men of thoughtful brows and flowing beards?" I asked. "Oh, yes," was the reply, "they are the members of the Deputation, don't you know, which came to beseech our Government to annex the others." The enigma was solved. They had been picked up on the highways and byways, like the mixed company pressed into the wedding party when the invited guests had failed to come.

And in all these expeditions, little wars, rectifications of frontiers, the white-gloved hand of the military man is always to be found by him who can catch a glimpse of what is going on behind the scenes. Heretofore these moves ended more or less successfully, the net result being aggrandisement bought by bloodshed, cruelty and demoralisation. As the invaders were immeasurably stronger than the invaded, defeat was never a contingency to be seriously reckoned with. But with the vast change which of recent years has come over the conditions of warfare, the cost of victory has in many cases gone up enormously, and threatened to become prohibitive. Yet military caste, more conservative than most classes, continues to read the new signs of the times in the light of the old, pooh-poohs the great risks which have to be run even in "little wars," and sets out on its "picnic parties" and military promenades with a light-heartedness which bespeaks more courage than judgment. General Baratieri was one of the first to be caught in this trap laid by his own class. With 15,000 brave Italians lying dead on the sand and soil of Abyssinia, none but the ravening birds of prey could keep up the illusion of the picnic. The South African War is the second example of the changed condition of things. The Boers were less numerous and less warlike than the Abyssinians; the British Empire immeasurably more formidable than the kingdom of Italy. But modern weapons, even though not utilised to the utmost, made the defence to a large extent independent of numbers, and the result is what we see. The question that now arises is this: will the military party not frankly acknowledge that the old traditional system will no longer work, and that instead of patching it up, a wholly new scheme of army reorganisation is needed? If they wait until a further experiment is tried between Great Powers, the disaster and misery for which they will have thus rendered themselves morally responsible will in sober truth stagger humanity. And to this we shall surely come unless the peoples themselves, who are now but pawns in the game of war, take the matter into their own hands, so far at least as the general principles involved are concerned.

The whole question is narrowed down to the compass of an argument which should appeal to every man of unclouded intellect. There are not two business firms on the globe which would differ from each other in solving it, were the case to be laid before them in its general outlines. Here are the military advisers of governments, unsaddled with real responsibility, declaring over and over again that a projected war will cost approximately so much money, will be over in so many weeks, and will be brought to a successful issue by so many men. To the civilians who deride their estimates as absurdly inadequate, they reply: "These matters concern us chiefly. We alone are qualified to speak authoritatively on the subject. It is our business, our profession." And they are implicitly trusted, because their answer would have been conclusive in the

past. But events now show that they erred, and not within the reasonable bounds which circumscribe errors in all walks of life, but so wildly that the mere man in the street could not well have been so far astray as they. Again and again they repeat their prophecies, which are soon afterwards belied by the vicissitudes of war. Then they turn to actual facts, and misconstrue them in the same wholesale manner in which they had forecast the future. So hopelessly incapable are they of realising, the conditions of modern warfare that they declare the struggle is over and done with before it has even entered upon the second stage. Now what guarantee has the nation that those specialists' advice or opinion can be safely acted upon in the future? Is it right that they should be allowed to exercise the irresistible influence upon the conduct of the nation's affairs which they have heretofore put forth without protest because without publicity?

Military men are what their training and environment have made them, and that is their best excuse. But it is no reason why they should be permitted to influence the course of politics or to weaken the defences of the nation. If one set's a maker of paraffin oil lamps to inaugurate a system of electric lighting, one must not be surprised if the going down of the sun means the beginning of utter darkness. There have been, there are, many military men who, having shaken off the fetters of the past, adjust themselves to the present and future, descry the trend of things, and warn their fellow countrymen that everything is not as it should and could be. But their voices have been drowned or their words twisted into meaningless phrases by their more conservative brethren. Caprivi, Von der Goltz, Rohne, Skougarevsky, Müller, Yung, Langlois, Hasenkampf, are names to conjure with. The men who bore them fearlessly announced the new factors of war to the masses. But the caste who claimed to possess alone the secrets of the art ignored these would-be reformers. And the masses bowed to the guild. They have since been called upon to pay heavily for their mistaken trust. Are they ready to do on a tremendous scale what has proved so ruinous in miniature? The drift of the new message was not that war is a disgrace to civilisation. It was no "sentimental rhodomontade": it was simply the statement of a fact which every literate citizen can verify for himself, that great wars as a means of settling disputes between states or groups of states are no longer efficacious, that the weapons of defence have been perfected to such a point that the people attacked, other things being more or less equal, are insuperable, that before gains and losses can mean decisive victories and defeats, the belligerents will die of hunger on the extensive battlefield, and their fellow countrymen at home will be reduced to misery. That was the revelation. It was uttered to deaf ears, but time and experience have given to it the stamp of truth. Will it still continue to be ignored?

The Hague Conference was a well-meant effort to secure for it universal recognition. His Majesty the Tsar was inspired by a humanitarian purpose of the most ideal kind; but he also saw that technical science was powerfully seconding the demands of latter day civilisation. Had the ground not been thus prepared, he would have withheld his project until the times were ripe for reform. But he knew that the change must and would come, and he was desirous of having it effected by voluntary agreement rather than by untold misery to millions. But the military caste, carefully keeping the technical reasons for the

innovation in the background, would discuss the proposal only in its ideal aspect, and, stamping it as visionary, thwarted the aims of its august author.

The history of the Hague Conference, which has yet to be written, is one of the numerous instances of the white-gloved hand unweaving the work of the greatest benefactors of mankind. On the Continent militarism was rampant. In the matter of armaments Pelion was being hurled upon Ossa, and rumours of forthcoming wars were spread by Governments as a means of stimulating Parliaments to vote the increasing sums needed to satisfy the demands of the generals. Russia was the Power whose smothered enmity was alluded to as likely to precipitate hostilities. But suddenly the Tsar of Russia, whose will is law in his own dominions, the military chief of eight millions of armed men, yielding to a generous impulse, comes forward and makes a practical suggestion. "The military burdens," he said in effect, "are growing, too heavy for our peoples. Let us lighten them. Happily we can do so, for such armaments are not needed, even if there were war; but why should there be? We all profess to desire peace. Let us prove the sincerity of our professions. There need be no sacrifice of national interests, for we can all agree to maintain our relative strength. We may begin by stopping as we are and making no increase. That will be so much to the good. If the arrangement turns out well we may proceed later on to positive reduction. Parallel with this convention let us see whether we cannot settle our disputes as private citizens would, by laying them before a fair tribunal and having them adjudged upon without passion or bias."

There was nothing visionary in this proposal; it was a very practical common-sense suggestion, and should have been all the more welcome that it came from a very country which Continental militarism affected to fear as the would-be peace-breaker. It would have given breathing-space to peoples, kept down taxation, shown that humanity can dispense with savagery and Christianity with massacre. It would have helped to unravel the Gordian knot of the social problem. Nobody doubted the good intentions of the Tsar; his power to put them into execution, so far as Russia was concerned, could not be called in question. The opportunity therefore was unique. But the military class set itself to thwart a scheme which was the indispensable condition of peaceful progress.

The first indication of the intervention of these interlopers was the elimination from the arbitration programme of the clause that should have been the 8th paragraph. The gist of it was that in cases where the friction between two States was such as seemed likely to lead to war, and could not be smoothed away by the parties themselves, they should be bound to bring their differences before an international court. Not that they could if they would, but that they must do so, in the interests of general peace. Some such measure was necessary; it was the logical outcome of the conference. Yet this paragraph never appeared. It was struck out in deference to the men of war, who represented that it would have a pernicious effect on the army, and change it into a crowd of gaily-dressed nobodies, whose mission in the world was taken from them. Drill and training would lose their effectiveness; for who could put his heart into work which was being stigmatised as immoral and superseded by civil courts? As usual, they had

their way, and with the omission of the 8th paragraph the soul of the peace movement was killed. That was the first feat of the military caste, and its complete success encouraged them in their vehement opposition to the second vital item of the programme, the stay of further armaments. The cry was raised that war, not peace, might be the upshot of the discussion, and Russia was called upon to draft a detailed programme of the points to be laid before the Conference. No sooner, however, was this attempted than the French General Staff entered upon the scene, and came to an understanding with their Russian comrades. The outcome of it all was that the leading idea of the original plan was watered and drowned in eight technical items, each of which is open to discussion from the standpoint of feasibility, and the first of which would have been superfluous had the principle of obligatory arbitration been accepted. The arbitration clause which was ultimately formulated was hedged round with provisos which rendered it wholly ineffectual.

Count Leo Tolstoy having asked himself why the Russian Circular did not achieve more signal success, believed that he discovered the reason. "A vast piece of deception," he said, "has been perpetuated and accentuated from age to age until it has reached its extreme stage of development to-day.... International relations have of set purpose been entangled more and more, and we all go in never-ending fear of rapine and murder. This state of things is due to the circumstance that the great masses are hoodwinked by the few to whom the deception offers enormous advantages." The best commentary upon this sweeping accusation is a comparison of the intentions of the Tsar with the achievements of the delegates.

Nor is this all. Even the propositions which passed muster and were elaborated in the council chamber and attacked during the debates, found no strong whole-souled supporter at the Conference. The officers sent to lead the charge and carry these measures through lacked more qualities than enthusiasm. A few examples will make my meaning clearer. The German delegate, Colonel Schwarzhofen, stated in an off-hand way that the Russian propositions dealing with a stay in the increase of armaments aimed at the realisation of the impossible, inasmuch as the Budgets and the effective troops of the various countries were not susceptible of a common measure, and he insinuated that Russia's motives were not wholly humanitarian. And this point of view was adopted by the semi-official German organ, the *Norddeutsche Allgemeine Zeitung*, which summed up the matter thus: "Every attempt to change the present state of things in the matter of militarism is an absurdity."

Now objections of that character could have been easily torn to shreds. That they ought to have been thus disposed of, is self-evident. Abundant materials for a crushing answer were to be had. In a short treatise of my own, published before the Conference was opened, I pointed out how the military obstacles could be pushed aside, on the authority of military celebrities like Caprivi, Von der Goltz, and many others. For those authorities make one proposition very clear: that whatever measure may be devised to gauge the relative strength of armies, the latter are become so unwieldy by reason of numbers that they now defeat their own purpose. The other theses which I likewise set forth and proved, and which were very pertinent to the discussions of the Conference,

were these: The superiority which larger forces may bestow upon the attack is neutralised by the invisibility of the defence; every artillery duel in which the parties are more or less evenly balanced, will end in the utter rout of the assailants; spade-work will replace open battles by sieges; latter-day tactics make it impossible to find space extensive enough for the troops to deploy; the generals will be unable to supervise the movements of the men they command; any victories that may be gained against these odds would be wholly indecisive; war will assume the form of a national struggle, a combat of people against people, and it must inevitably drag on until the nerve of war, the means of waging it, dwindle away to nothing, whereby the resources of the invader must first dry up.

A sum in addition is not more readily grasped than the impotence of the Great Powers to carry on the war for which they assure their subjects they are making costly preparations. Has Germany a desire to plunder or cripple France? If so, the wish will remain in the stage of a *pium desiderium*. Her own military light, General Von der Goltz, puts the matter in a nutshell thus: "France is so well prepared for war, her frontiers are so strongly fortified, that the enemies of 1870 are no longer recognisable. Operations will drag on so slowly that in following on a map the movements of the troops the latter will appear stationary." If we select another possible theatre, Russia, Germany would find herself in the position of Mrs. Partington doing battle with the Atlantic Ocean, armed with a mop. "Russia," the same authority tells his countrymen, "in consequence of its vast extent and relative lack of communications, bristles with formidable dangers to the invader. Moreover, a war against Russia could not possibly come to an end in one campaign, and several would be requisite in order to attain any sort of a result. A theatre for war is offered by Germany alone, where there are chances that an energetic attack, carried out with rapidity, might lead to a decisive finish." For that reason Germany's efforts ought to tend to keep her territory from ever again becoming the scene of hostilities, and to have all her accounts settled outside her frontiers.

Besides, Germany's strength in peace would be her weakness in time of hostilities. The rapid transformation of the Empire from an agricultural into an industrial State has many advantages, but war would turn them into dangers. With a population now numbering 16 millions more than in 1870 her output of corn is less to-day than it was then. With her supplies partially cut off, famine would soon fight on the side of her enemies. Even at the outset of the straggle prices would go up rapidly, out of all proportion to the actual shortage of supplies, and to such a point that one half of the population would see their staple foodstuffs placed beyond their reach.

Russia, on the other hand, with nothing whatever to fear from an invasion, has everything to lose by attacking her neighbours. Technical and financial hindrances of the first magnitude would bar her way if, say, Germany were her objective. France is in a somewhat similar position, with this aggravating difference, that an offensive war, whatever else it might bring in its train, would sweep away the Republican form of government and leave the ground clear for the dread unknown.

Those facts and a host of others would, had they been duly insisted upon, have shown that the Tsar's projects were not only feasible but indispensable. But militarism refused to entertain them. The army representatives pulled together as one man to strike the labours of the Conference with barrenness. Many endeavours, some purely formal results, no considerable step forward, that in brief is the sum total of a movement which might have marked the beginning of a new era in the history of mankind.

But oil and truth rise uppermost at last, and the lesson taught by those facts, if not chronicled in ink, will be written in blood and burned in with fire. The data which the delegates at the Hague might have extracted from books are now seared into the souls of people by the terrible scenes unrolled to the world by the war of South Africa. The writing on the wall which no man cared to read has been followed by calamities which none can afford to ignore. The strange events in the South African struggle are classed as enigmas. But in reality they make very plain reading. The key to the cipher is to be found in the changed conditions of warfare. Everybody knows or feels that this is so, many are declaring it from the housetops, but militarism is again busy disguising the issue, distorting the facts, dissembling the horrors of the reality. If it succeed in hindering the peoples from drawing the practical inferences from this object-lesson, the next stage in our progress will be war plus bankruptcy and rain.

The surprises of the Transvaal struggle are the results of this unreadiness to see things as they are and as one dislikes them to be. With the origin of the war I am not concerned. But I am disposed to think that if both sides had clearly foreseen what they have since so painfully learned this foresight might have given a different and a more desirable turn to the course of South African history. And I further contend that familiarity with those telling facts, and with their influence upon the vicissitudes of war, was one of those rudimentary obligations which duty imposes upon military advisers of Governments. But the fact is -whatever may be said of its ethical character -that the forecast of the campaign, sketched by those who could and should have been in a position to announce it, was so utterly wrong as to stagger belief. To-day even the army leaders cry *nostrâ culpâ*, and take credit to themselves for this frank acknowledgment, but so long as they shrink from a full and candid admission that great wars will be indecisive and that little ones can no longer be waged in the traditional way, their confession is not unto salvation.

Politicians are far less blamable, indeed they cannot be reasonably held answerable for the rude reverses of the war. Everything was left - had to be left - to the military advisers.

They were the initiated, they had mastered the secrets of the craft, they insisted on being alone heard, and they ruled civilians out of court. What a supernaturally far-sighted Government might, however, have done was to order two alternative plans of campaign to be drawn up, one on the old system the other on the new, and to have chosen between them. But Governments cannot be censured for not possessing uncommon powers of insight or interfering with a guild which enjoys the confidence of the whole nation. But with the results of that war before our eyes, it is not too much to

say that to continue to display that implicit trust in the profession which is morally, but not legally, responsible for them, would be to abdicate one's reason, to run counter to rudimentary practical instincts. There is not a business firm in Europe or the world which would consent to carry on its affairs with this slipshod happy-go-lucky indifference. When the war began ten million pounds were spoken of as sufficient; twenty times that sum has already been spent, and a million pounds a week are being paid for the killing of a few farmers out of some thousands who fight, fly and fight again, The nation demands results and it receives only explanations why they are not forthcoming. Fate, fortune, wind and weather are the causes. But to a crazy ship all winds are contrary. The system. adopted by men of war is, of course, right; that must not be criticised. No mere mass of civilians shall disturb the circles of the dreamy Archimedes.

The sober fact is that the vastness of the miscalculations as to men, money and tactics which have characterised all the military estimates since the outbreak of the war point not to the action of such unforeseen circumstances as even the most sharp-sighted army leaders might have excusably overlooked, but to something radically wrong in their entire conception of contemporary warfare. This is probably a *priori*. But if, in addition to its internal probability, a number of celebrated military authorities in Germany, France, and Russia come forward and say: "Your idea of war is obsolete. The conditions of success, where success is still possible, are wholly changed from what they once were. We have summed up those altered conditions and forecast their effects, and events have established the correctness of our conclusions. Every battle, skirmish, siege, and charge, all the ups and downs of the struggle in which you have been engaged, are the literal fulfilment of our predictions." Does it not stand to reason that the new plan of campaign should be carefully studied, the distressing facts of the war explained in the light of the altered conditions, and the new conception substituted for the old?

There are but two possible ways of accounting for the British reverses in South Africa: either the troops have degenerated beyond recognition, and seven well-fed, well-trained, well-led Britons are barely equal to one hungry, self-willed, insubordinate Boer, or else the improvements in war-weapons bestow upon the defensive an enormous superiority over the attack, other things being approximately equal. No man in his senses will adopt the former of these hypotheses. But if the latter be true -and it was proven to the hilt, and ceased to be a mere hypothesis long before the South African War-why are the practical consequences not boldly drawn and the changed conception of warfare taken as the groundwork of the plan of operations? In theory it has never been refuted; in practice it has been painfully confirmed. One can well understand the reluctance of men naturally conservative to break with the past, to confess that the system with which they themselves are identified is useless, and even dangerous, and to throw their knowledge and qualifications aside as so much superfluous ballast, and to set themselves to learn anew. Natural this unwillingness certainly is, but so are many other things almost equally pernicious. But the nail was hit on the head when Mr. Brodrick, from his place in the House of Commons, announced that the reverses in South Africa are to be put down to the fact that nowadays a few men, armed with latter-day weapons and keeping strictly to the defensive, are able to withstand for a long time

adversaries superior in number, and to inflict upon them very severe losses. This is the position in a single sentence. But it is not enough to assent to it mentally while continuing to take measures which presuppose its falsity. As well break the ice of a northern river in order to seek for hot water beneath its surface.

The superiority of the defensive has been raised to its present high level mainly by the introduction of quick-firing rifles, smokeless powder, and the extensive use of earthworks and barbed wire entanglements. Those are the principal factors. They are universally known, universally recognised, universally employed. The importance of trenches and barbed wire is become a truism in contemporary military science. Yet a man of the high abilities of Sir John Ardagh undertook, at the Hague Conference, to refute my estimate of their significance. They cannot, he maintained, be raised quickly enough to make it worth while taking them into account! With the numberless and convincing facts before my eyes which leave no doubt whatever on the matter, I was amazed that such a line of argument could be seriously taken up. To say nothing of striking facts, many and illustrious military authorities must be wrong in order that Sir John Ardagh may be right, so many indeed that were there no other arguments available, I should still feel impelled to maintain my position. But this is no metaphysical problem; it could and can be tested. One company of soldiers employed for the space of a single day would be sufficient. The expense would be covered by the price of some spades and coils of barbed wire. Was the issue so insignificant that my assertions were not worth verifying? Tests, however, have been made since then, not, indeed, in England, but on the South African veldt. A general in the Orange Colony - one of many whom real war has enlightened -wrote in February last year: "We have nearly as many guns as spades, but I am inclined to think the humbler and rather despised engine of war the more useful of the two." Whether theorists of the traditional school or men who have seen with their eyes what latter-day warfare is become are the better judges of such questions, I will not now stop to consider, but I cannot forget how amusingly Sir Howard Vincent, himself an eye-witness, describes the persistence of professionals to uphold their exploded notions in the face of the facts that annihilate them. "No artillery officer," he writes, "will ever admit that his range-finder and his careful laying were ineffective." More's the pity for his men and his work.

To me personally the degree and the causes of the superiority of the defence over the attack are matters of absolute indifference. But to the cause of civilisation and peace and to the efficiency of national defences the point is of the highest importance. For that reason the Government ought to have had the subject officially cleared up. This it declined to do. I then proposed, in the columns of the *Daily Telegraph*, that a body of specialists should be despatched to the front in order to study the phenomena of war from this point of view, and to draw up an exhaustive report on the new conditions they revealed. I added that I would gladly subscribe to a fund to be raised for this purpose by individual effort. But neither was this suggestion taken up. And yet I venture to think it would have conferred a boon upon the nation at large.

My reason is this. Military matters, as such, are withdrawn from the purview of the masses and referred to specialists, while the vital questions of war and peace are left to

the public. Now the public cannot form an adequate opinion without knowing something of the way in which the new conditions affect the cost of war in men, money and the economic interests of the nation, as well as of the factors now become essential to its success. If, for example, a struggle were about to be entered upon which would cost 150 millions sterling, would drag on for three years, cut off several sources of food supplies, arrest the course of trade, paralyse the national industries and decimate the nation, it is natural to suppose that the people who would have to bear the brunt of all those sacrifices would first weigh well against them the anticipated advantages, and likewise compare the gains and losses which would accrue from an amicable settlement of the dispute.

It may, of course, be urged that the masses are no fit tribunal for questions of this complicated nature. I admit that this may, nay, will be said, but I hold that it will no longer be believed. For no Parliament, however unversed in such matters, could possibly err more wildly, more disastrously than the military authorities have on their own showing blundered. If hostilities had broken out between Great Britain and one of the first-class Continental Powers, in lieu of the Boers, the results of these mistakes would have been irremediable. Moreover, if popular assemblies be qualified to vote for and against war, the least they can demand is that they should have some official data supplied them which might help them to realise what it is that a struggle between States now involves. So long as they are reduced to taking their opinions on this point cut and dried from military men, so long will the caste continue to exercise its mischievous influence on politics.

I trust it is understood that I am speaking without reference to any particular officers, or even countries. In these respects, indeed, there is a family likeness running through them all. Col. Henderson, of the Intelligence Department, who is himself an eminent military authority, says, very truly, in characterising the heads of armies on the Continent: "In almost every article we mark the same defects, a reckless treatment of evidence ... a positive disinclination to admit that the organisation, drill, training and composition of Continental armies might be bettered, and, lastly, the habit of testing strategic and tactical operations by a number of hard and fast rules." If this be true of foreign armies, is it really otherwise in that of Great Britain?

Another instance of the slipshod way in which they are wont to treat all new suggestions occurred here in England to myself during my sojourn last summer. I had laid stress on the circumstance that competent military men, eye-witnesses of the South African War, praised the conduct of the civilians who had taken part in it, and affirmed that the qualities they manifested were more useful than those of the trained soldiers. Before the war I had thought that this would be so, and I was pleased to see my anticipations confirmed. But my words were twisted by military men into a proposition which was absurd on the face of it. It was within the hospitable precincts of the United Service Institution that I learned, to my dismay, that I was alleged to have maintained that "regular armies and trained men are no longer necessary." I never held, still less did I assert, anything of the kind. What I said, and still uphold, is that the methods of training now in vogue on the Continent are not conducive to the ends in view, that a modification

of the Swiss system best harmonises with present and future needs, that long service is neither requisite nor desirable, and that the reorganisation of the British Army on the lines sketched by Field-Marshal Lord Roberts are calculated to drain the economic resources of the country to no useful purpose. And I heartily wish that the last of these statements could be truthfully gainsaid.

What is the object of a British Army? To play in the future as in the past a preponderating rôle on the mainland of Europe? If so, it will have to bear some reasonable proportion to France and Germany's two millions and to Russia's four or five millions. And that is out of the question. Therefore, as an instrument of offence, it is eliminated. Every endeavour the object of which is to make it effective for attack in a struggle with a Great Power is misplaced and the money spent in it thrown away. Is it needed for defence? To some extent it may be. But the first and main line of defence is the Navy, and if that proved a broken reed to lean upon - a supposition which cannot be entertained for a moment - no army that could be raised at home would avail to set things right, because forces other than foreign troops would make themselves disastrously felt, operating in favour of England's enemies. If, therefore, the objects of a British Army be to furnish the second line of defence, and to keep order in the Colonies, the model on which it should be reorganised is assuredly not that of those military States which pursue wholly different aims. That is a plain proposition which the man in the street can grasp as firmly as the experienced soldier.

Army reorganisation is a practical corollary of the Transvaal War. In England nobody denies the pressing need for it, and it may be taken that many will affirm this necessity with due emphasis when peace reigns again in South Africa. The efficiency of the contemplated reform will depend entirely on the adjustment of means to ends, and for this no craft mysteries are indispensable. Nothing seems more entangled than the administration of British justice. But it possesses some inestimable advantages, one of which was formulated, I think, by Sir Edward Coke, when he laid down the principle that nothing can be held to be law which is not also common-sense. Now, why should anything be allowed to pass as military art which cannot claim for itself the same rudimentary attribute? Yet that, I fear, is what will happen if the task be entrusted to specialists who have ancient traditions as well as modern requirements to take into account. I speak with diffidence. Nobody yields to me in admiration for the brave British officers who have emulated in Africa the feats of prowess which made their ancestors famous throughout Europe. And foremost amongst these I recognise Field-Marshal Lord Roberts, than whom no man more richly deserved his popularity. However widely, therefore, I might differ from him on purely military questions, I should hesitate to join issue with him here, were it not that many of the most illustrious of his colleagues abroad have publicly taken their stand on the side opposite to his, impelled by the unanswerable logic of facts. But emboldened by this good company, I respectfully venture to analyse certain of the gallant Earl's recent utterances.

"My idea is," Lord Roberts says, * "that the fate of battles in the future will be as often decided by the result of this comparatively close distance-firing+ as it has been by the bayonet charge in the past." Here his lords hip manifestly has in mind the assailants, for

the attacked party can, under present conditions, afford to fire without great precision at the distance named, inasmuch as every bullet traverses the entire space, and will pierce as many as five men if they happen to be on the line of fire. For these therefore it is the number of rounds, not the accuracy of aim, that constitutes the first and principal condition of success.** Now that point of view presupposes that the primary work of the British Army is attack. Let it not be said that in war attack may be the best method of defence. Frederick the Great was right when he expressed this opinion, but the factors of war were very different then from what they are to-day. At present strength is inherent in the defensive, weakness in the attack. In any case, if the Army is to be remodelled with a view to rendering it a powerful instrument of offence, its numbers must, as I pointed out, be much less disproportionate to those of Continental armies.

*** Speech delivered at Bisley on July 21st.**

+ 150 yards.

** According to French official data, in order to hit a man with the Lebel rifle the number of shots required is:

Distance in Metres:						Shots.
200	...	...	...	...	...	3
500	...	...	...	...	...	7
600	...	...	...	...	...	9
700	...	...	...	...	...	10

If what Lord Roberts farther says be true, and it cannot be doubted - "even in the very extended formations which we have now been forced to adopt, so as to give every man a chance of finding some cover and to deny the enemy any conspicuous mark, an advance in the open will always be most difficult unless assisted by a powerful artillery and rifle fire from the flank" -how, I ask, can an attack be made with anything like the effects formerly produced by a bayonet charge? The bayonet charge of bygone days was at bottom a psychological phenomenon, so far as the results are considered. The enemy were scattered by fear. A living wall of men bristling with gleaming steel swept rapidly forwards against another compact body of soldiers. At the first clash, and sometimes before it, the weaker side-weaker in nerve force, in courage-turned panicstricken and fled. Therewith the work was done. It was not the actual slaughter but sheer terror that turned the scale. Now no operation remotely comparable to that can any longer be carried out. As the hare must be caught before the cooking begins, the foe must first be sighted before any advance resembling a charge can be attempted. Smokeless powder, the extended battle-field, loose formation and good cover combine to hide him from his assailant.

If we seek to blend Lord Roberts' scene of close firing as the brilliant finale of a hard-fought engagement with that of a vast plain destitute of human beings, the resulting

picture would need two canvasses. "When the Army comes home," remarked Sir Howard Vincent in his lecture at the United Service Institution, "you will be surprised to find how few members of it have ever seen a Boer, save with a flag of truce or as a prisoner. I did not meet half-a-dozen officers in all Sir Redvers Buller's army, who saw one at the battle of Colenso." And citing an extract from the book: "The Work of the Ninth Division": "No human interest, a bare plain and 800 yards off a line of trees, not a Boer or even a puff of smoke to be seen all day. Only if one raised his head, the ping of a bullet and the sight of another dead or wounded comrade." In one sense there is ample room on such a vast plain for the close firing which Lord Roberts thinks will take the place of the bayonet charge in deciding the day -but very little opportunity. At the battle of Stormberg the British advanced to within a few hundred yards of the Boers without seeing them, and the result was, not that they fired at close distance, winning the day, but that they were totally routed, leaving one-third of their force in the hands of the enemy. War correspondents informed the readers of their papers that even after the Republicans had opened fire the British were unable to locate them. At Magersfontein the dauntless Highland Brigade approached to within 300 yards of the foe without once suspecting that they were within range, and by the time they grew aware of their position they had lost a quarter of their force as the result of a few volleys from unseen rifles. At the same engagement the Guards fought for fifteen hours against an invisible adversary. And even when the enemy's whereabouts was known it was no easy task to determine how far he was away. The Austrian Military Attaché, Captain Trimmel, says in this connection: "The fire of the British was generally inefficacious owing to the difficulty of appreciating distances, for it was never possible to see the enemy's fire (except at night)." Surely all this looks almost as unpromising for the brilliant finish which close firing is to effect as for the historic bayonet charge itself.

Perhaps in a war with one of the Great Powers the conditions would be less disappointing? On the contrary, they will be found to be much more so. The German Artillerist, General Hauschild, who may be credited with knowing intimately what he is writing about, says that the art of dissimulating the trenches will be immeasurably more perfect in European armies than it is in those of the South African Republics. This being so, when and where, one may legitimately ask, will the tactics preconised by Earl Roberts come in?

His lordship would not, of course, send forth his men without strong support. I trust I am bearing the cardinal fact in mind that help in question would assume the form of "a powerful artillery and rifle fire from the flank." The idea, I hasten to say, is admirable, the only difficulties lie in its execution. I venture to single out one. Among the leading facts of latter-day warfare, one of the most salient is that artillery fire has little effect against entrenchments. This unwelcome lesson has been taught over and over again during the South African War; but it evidently has not been thoroughly learned as yet. Whether the guns were Boer or British, their effect against entrenchments was meagre in the highest degree. The action of Paardeberg against Cronje and his men on the one hand and the attack made by the Boer artillery at Spion Kop on the other, are typical cases. At the former place the strongly-entrenched Republicans were subjected to the bombardment of from 50 to 100 guns for ten days. Yet out of 4,000 men they lost but 179 in all, most

of whom were killed or disabled by rifle fire. The casualty list traceable to the bombardment did not exceed 40. The secret of this comparative immunity was their entrenchments. Calculating on the basis of an hour and a cannon as unit, we find that the Boers were exposed to the action of 18,000 hours' cannon, with a result so paltry that it hardly deserves mention. Now take the case of men being bombarded who are not entrenched, and the difference is brought out into bold relief. The British at Spion Kop were in this position. The artillery fire, therefore, had free play. Hence, although the Boers had ten times fewer guns than the British possessed at Paardeberg, the latter lost 1,500 men. In other words, the entrenchments at Paardeberg rendered the British artillery fire 900 times less effective than it would have been without them. This is fully borne out by what occurred at Ladysmith, where the Imperial troops were entrenched; the, casualty list caused by four months' bombardment amounted to somewhat less than two men killed or wounded a day. The story of Kimberley and Mafeking confirms this observation, which is henceforward a fact acquired to military science. All this was known before, and to some extent published. Specialists were so impressed with the facts that General Hauschild writes: "Nothing remains *for the attack* but to have recourse to trenches and earthworks."

Now that, I venture to submit, is a state of things which leaves very little scope for Lord Roberts' substitute for the bayonet charge, and it needs no special initiation into craft mysteries to perceive that it dovetails with all the surprising vicissitudes of the war which have any bearing upon the subject. And no scheme of army reform which leaves those lessons unheeded will prove other than a broken reed to the nation which leans upon the so reformed troops for its defence. If this statement be challenged, I shall be highly pleased to learn on what grounds. Nor does that complete the case. The same German authority adds: "But it is obvious that for this (the construction of trenches and earthworks) the attack is in a much less favourable position than the defence. As a prelude to assault, an attempt must be made to destroy the structures sheltering the troops in reserve, and this cannot be done without howitzers and heavy siege guns, and *is a well-nigh impossible task*, owing to the rapidity with which, as at Plevna and in South Africa, new works can be thrown up." This difficulty, which already borders on the impossible, is further enhanced by the circumstance that the number of artillerists at a given place is very restricted, and that before their fire can inflict any damage at all, it must be directed with that precision which presupposes an accurate knowledge of distances. And few conditions are less easy of fulfilment. To make matters, if possible, still worse, the artillery fire must be aimed over the heads of the assailants' own troops, who are attacking and seeking shelter at distances of 20 paces, one soldier from the other. To realise what this means, one has but to watch the results of artillery practice in times of peace. But I will let a specialist speak. General Skougarevsky, formerly Chief of the Russian Staff, writes: "Note what happens when firing goes on in peace time. The targets are at a distance of some hundreds of yards, yet many shots strike the ground a dozen paces from the *marksmen*." What shall we behold in war time? It will hardly be denied that the points of resemblance between the advance of the attacking party to-day and the bayonet charge of former times are dwindling rapidly into thin air.

To imagine a successful onslaught, such as Earl Roberts seems to consider typical, is, I respectfully submit, an effort which can be accomplished only by conjuring up a picture of the battlefields of the past, and making complete abstraction from those of the present and the future. Let us follow however in spirit Lord Roberts' sharpshooters, as they advance each one twenty paces from his nearest comrade. They are all skilful marksmen, who need but a visible target to do credit to their training. But the human targets are invisible, snugly ensconced behind excellent cover, which belches forth death-dealing missiles whenever a sharpshooter exposes a portion of his person. Can it be seriously believed that these ill-starred marked men, who scarcely dare raise an arm or a hand, will succeed in killing, wounding, or terrifying so many of their hidden enemies that the latter will rise up and run? The query has only to be asked; the answer may be taken as given. But as the point was raised by the statement of the eminent General whose name is a household word in the British Empire, I distrusted for a moment the conclusions of his Continental colleagues and the teaching of facts, and, freeing my mind from conviction, set myself to study the problem *da capo*. In the first place I, asked myself, can it be that the illustrious Field-Marshal fancied that the lines would follow so rapidly that the first attack could be delivered by a considerable mass of men? As this would have given me a clue to Lord Roberts' conception of latter-day tactics, I requested Col. Henderson to inform me as to the distances which separate the lines of skirmishers. And the reply courteously given to me was that "the lines of skirmishers in South Africa were generally at a distance of from 200 to 400 yards apart. At first the skirmishers were five paces apart, afterwards the interval was increased to 10, 15 or 20 paces, according to the particular task -reconnaissance, feigned attacks, secondary or real attacks -on which the skirmishers were engaged."

I then tried to imagine the massing of lines thus separated from each other by a distance of from 200 to 400 yards, for the purpose of attacking in force. To cover that distance they would need from one and a half to three minutes. Not even the "constant reader" of the daily paper will see without being expressly told that that space of time is quite enough to allow the entrenched enemy to mow down the entire first line before it could be joined by the next one. There is, however, an alternative. The attackers, instead of dashing forward, might await their supports. But that contrivance would in no wise lessen the difficulty; for then the distance between the soldiers (20 paces), which is admittedly essential, as well as the 200 to 400 yards which intervene between the lines, would disappear. If we suppose it shrunk to five yards the result would be only that four lines of supports would be gathered together. And that, I contend, is not a mass capable of dislodging an entrenched foe. Many more would be needed. They could, no doubt, be brought up in the same way. But the upshot of the whole manœuvre would be a serried mass of men, who must remain so long exposed to a deadly fire that their only cover would be behind the bodies of their dead and wounded comrades.

Further, at what moment and at whose command will they dash forward on their errand of death? There is usually one officer in the line to sixty men, an arrangement which entails a dispersion of 1,200 paces long. As every soldier is independent, and allowed to use his judgment, how many will advance and how many will tarry where they are? That is a point worth considering. But taking the most hopeful view, and assuming that

the courage of one and all is screwed up to the point of heroism, they will be far too widely scattered for the officer to command them efficiently. It is obvious therefore that "Jack-in-the-box tactics," as they have been termed, cannot possibly do what Lord Roberts expects them to accomplish. And for a very good reason; because the effects which were attainable in the old days have become impossible at present. To fail to see this is to substitute imagination for reason; and to reorganise an army on the hypothesis that the tactics of Waterloo and Balaclava can be repeated in the Twentieth Century is to set about building a house on the back of a whale which happens to resemble an island.

Firing at a distance of 150 yards being, according to Field-Marshal Roberts, the decisive factor in future wars, it follows, of course, that soldiers should be trained in accordance with that view, and the eminent commander has informed the public that the practical consequences are already being drawn. "Our course of musketry has already been modified to meet the changes proved by the experiences of the war to be necessary; and in the revised edition of the Infantry Drill Book, which will be issued shortly, greater scope will be left to section leaders, with a view to developing the individual intelligence of the men." For modern soldiers must be something more than the wheels of a vast machine. Speaking of former times, when the smooth-bore rifle was in use, the Commander-in-Chief further explains his idea when he says: "The tendency of military training in those days was rather to stifle individual intelligence, and to teach the men to move and act together mechanically. The introduction of long-ranging, accurate shooting weapons has changed all this." The soldiers of the future, therefore, are to be men of initiative, judgment, enterprise; then they may be trusted to score triumphs as decisive as any that were won in the good old days of "Brown Bess." Possibly; but hardly in any other sense than that in which one might draw up an excellent plan for catching a great auk. The scheme might be perfect; but so long as the auk remains extinct, one must dispense with practical results. Decisive triumphs, such as those that characterised former wars, are no longer possible, and Lord Roberts' scheme, however cleverly put together, will therefore not secure them. And how many of such advantages over the enemy as can be gained nowadays will be necessary before an army of millions will confess itself beaten? For this, a period of time will be requisite before the lapse of which the nerve of war will have wasted away, and bankruptcy and ruin have imposed peace. A short sum in proportion will diffuse light upon this assertion. If 50,000 farmers, lacking some military qualities, can hold out against the British Empire for, say, two and a half years, inflicting enormous pecuniary losses upon the enemy, how long would the struggle be protracted if two trained armies of millions operated one against the other, sieges taking the place of battles? To a mere civilian the answer is appalling. If the military man saw it as clearly, and confessed it as frankly, he would feel that he was passing a death sentence upon his own order.

I venture to think that the ardour of his hope of grafting upon recruits the inestimable quality of initiative hinders Lord Roberts from discerning the obstacles in the way. To begin with, it is an inborn gift, not an acquired accomplishment. A man has it, or he has it not. It may be crushed out of him, but cannot be created in grown up men, and least of all by alterations in the Drill Book. The efficacy of the Drill Book and the grafting power

of the officers depend upon the blind obedience of the men; and blind obedience never begets initiative. Army discipline rests upon subordination and the suppression of individual will to such a degree as to outweigh even the instinct of self-preservation and the innate fear of death. To suppress initiative for the purpose of fostering it, is like the attempt to drive out devils by Beelzebub. A celebrated Army doctor, whose views I asked for on this subject, assured me that grapes would as soon grow upon thorns as the quality aimed at by Lord Roberts would result from training. "The military machine exists for the purpose of destroying individual judgment and turning out obedient, will-less men. You may set it going, or arrest it, but you cannot alter the character of its work. An officer sent me a letter one day, with a request to give him a helping hand in having him promoted. His chief merit he set forth in these words: 'I have served under many chiefs for the past twenty years, yet never once did I make bold to criticise their acts, never once take any step on my own initiative.'" That is the quality which Army drill fosters.

Shifty, resourceful men, capable of discerning opportunities and of using them without waiting for the word of command, can, no doubt, be had. They are the stuff of which successful tradesmen and manufacturers are moulded. But they must be paid for, and to-day the price is prohibitive. Great Britain, with all her wealth, cannot afford the luxury of her Army. Enterprise and initiative in business, however, should not be confounded with the same traits in warfare. The difference between the two was never so marked as at present in consequence of the surroundings which tend to terrify the imagination and paralyse the will. An isolated human being moves cautiously about on a desolate plain studded with dead bodies, and without a sight or sound to cheer him to enthusiasm or to adsorb his fear of death. He may not be naturally timid, nor even afraid to die, but he has a horror of the lingering tortures that may rack his soul for hours or days, if he be wounded and not found. Even in former wars disabled soldiers sometimes lay for days undiscovered, a prey to maddening thirst, to delirious pain. A rise in the ground, a ditch, a tree trunk, the fringe of a wood, hid the body from the ambulance, and Ugolino, in his hunger tower, was hardly worse off than such pitiable wretches. Nowadays, this danger is greater, for the field over which the soldiers are scattered is immeasurably vaster, and the duration of the combat very much longer. Visions of these nameless horrors may well terrorise many a man who, under normal conditions, would be brimful of enterprise and as shifty as Ulysses.

Even if Lord Roberts found the recruits whom he seeks, it is very doubtful whether their action would justify his expectations. In the past, of which he is probably thinking, his hopes would have been warranted. Bands of brave men, pressed closely together, would fling themselves into the final dash forward, following the floating flag, fired to enthusiasm by the strains of martial music, spurred to heroism by the example of officers who treated a shower of bullets as if they were raindrops. Like a mighty mountain lake bursting its bounds, the human torrent swept everything before it. To-day, the picture is painted in more sombre tints. The soldier is alone. There is no inspiring example before his eyes; no lively music ringing in his ears; no officer's words encouraging his efforts. He remembers having heard that the victory depends upon the rapidity with which each one finds shelter, and the precision with which he fires. Can he

rely on this skill and precision in his comrades? Can he even be sure that they will emerge from cover, and not lie still feigning death? Furthermore, he knows that if he advances he must expose the whole of his body to the missiles of a wary enemy, who shows but the eighth part of his. Would it surprise the psychologist to learn that in that supreme moment of danger and isolation, this man of initiative would persuade himself that nothing which he could do would have a decisive effect upon the action? I confess it would not astonish me. I still remember how the inhabitants of an Armenian village acted when celebrating the birthday of their parish priest. They had agreed among themselves to make him a present of a cask of wine, each vine-grower to pour in a bottle. But when the cask was filled and tapped, it was found to contain water. Each one had flattered himself that the cask would be replenished with wine without his own contribution. Human nature is widely diffused among men. Prudence will especially characterise the latter-day soldier, for that is one of the principal objects of the improved system of training. They must always run to cover, seldom or never offer their persons as targets. This caution, enhanced somewhat by the weird surroundings of the battlefield, may suffice to set them thinking after the manner of the Armenian villagers. They will then have the defects of their qualities -nothing more.

But instead of arguing further, would it not be better to put the subject to practical test? Experiment should by right precede all such discussions. In my own case it has. I have had Lord Roberts' suggestion carefully tested, and the results embolden me to maintain that the difficulties in the way of troops ordered to advance to within 150 yards of the carefully-entrenched enemy will be such as to render the movement either wholly impracticable or tactically worthless. The experiment could be repeated by officers with advantage. The British Army abounds in excellent materials, and I am prepared to abide by the result. Let some of the best of these troops be chosen and commanded to advance just as they would against a real enemy. Let it be noted how often and for how long they were visible to the adversary, who may be half as numerous as themselves, and how many rounds they fire. Their accuracy of aim can be gauged by offering them movable targets. But the barbed wire entanglements should not be neglected, which they will have to grapple with on their way. When that test has been applied and the finding declared, I am convinced that even military men, despite their special psychology, will see the illusive nature of the system which they now champion as efficacious. Experiments are being daily made in every human industry. It is an essential condition of progress. The army organisation, on which so very much more depends, ought not to constitute an exception. My own researches give me the right to affirm that the number of men that must be put in line in order that, allowing for losses, they may confront the enemy with equal force, would be enormous, even though at the moment of setting out the assailants were numerically twice as strong as their foes.

Long before the South African War experiments were made, which led to the results I have now formulated; but military men made very short work of them. They simply said: "The argument would be convincing if the conditions during manœuvres were identical with those of the battlefield. But they are far from identical. When playing at war the enemy will fire steadily, rapidly, accurately. But not so when missiles of death are flying around them, and every moment may be their last. Fear and excitement hinder them

from mobilising the qualities which constitute skill. Their fire will be far less deadly than is assumed, probably not more than one shot in a hundred, it may be in a thousand, will take effect." But the Boer rifles have since riddled that argument, and it will never rise again. A substitute, however, has already been found for it. The Boers, we are assured, are very good marksmen, and their likes will never be found in future campaigns. Consequently they must not be taken for average soldiers. Now I regret to say that I cannot endorse that view, and for a good reason: It would contradict established facts. Here is one among many such. The United States Military Attaché, Captain Reschman, said: "Although still fine shots, the Boers are no longer such excellent marksmen as of old; they are still hunters rather than soldiers, and will not hold a position to the last."

"Even so," urged the advocates of militarism, "if the fire be as deadly as you assert, all that the advancing soldiers have to do is to take shelter. Surely that is easy enough. The fields upon which cover cannot be obtained are rare." This issue out of the difficulty, if it were real, would not be a solution, for it would do away with Lord Roberts' decisive charge altogether, but it is imaginary, merely a reading of the present by the light of the past. Even those rare military experts who have no axe to grind, whose one idea is to ascertain facts and to adjust contemporary tactics to feasible aims, tell us that this child-like trust in the ubiquity of cover is a delusion, and a most dangerous one. For the defender chooses his own fields of action, and his first care must and will be, to see that the assailant lacks the cover which is so essential a condition of his success. If Lord Roberts were in command of the country invaded, would not that be one of his chief concerns, or would he select such broken ground as the enemy would deem suitable for the cover it offered them? And if Lord Roberts, nay, even a layman of average intelligence, would make it his business to balk the calculations of the foe, what can be thought of a scheme of attack based upon the absence of such rudimentary common sense? What, for instance, would be said of a chess-player whose scheme to mate the king took no account of the defence which his adversary must necessarily make? I am endeavouring to put the point clearly for the reader who has made no special study of matters military, and the great difficulty I foresee is that of getting people to believe that an eminent specialist like Lord Roberts could blink facts which powerfully impress even the mind of the unbiassed outsider. And I fancy I hear people say: "If it be true that cover is so difficult to find, surely other military celebrities would already have discovered and pointed this out, and the British Commander-in-chief -who is, doubtless, familiar with all that a professional man should know-would have taken due note of it." To this I reply, that military celebrities did find out the difficulty, and emphasise it, too. Shrewd, experienced professional men have underlined the present state of things already. For instance, General Pellet-Narbonne, whose name needs no introduction, wrote, in his report on military progress during the past 25 years: "If great extension of the field of fire be the first condition of its efficacy, we fail to see why the party attacked should forego the advantages of this first condition, unless, indeed, it were in order to please the attacker. It is not open to him to select ground offering natural cover, and he will be forced to march across a country exactly determined beforehand and of a nature to strengthen the defenders' fire." That is logic, it is common sense, it is matter of observation. And in military science, as in English law, common sense can never run counter to fundamental principles. What it really comes to in simple words is this: Lord

Roberts says in effect: "The assailants are, above all things, in need of cover. On that they must rely for whatever success is attainable. Therefore, the men must be trained to run forward, fire, and drop behind shelter again. On the other hand, it is the enemy's interest that there should be no cover for the attack. Moreover, he can choose his own position, and as the area in question is only one of 150 yards, nothing is easier than for him to select such ground as will give no screen to the attacking party. None the less, we base our calculations on the assumption that he will neglect his vital interest and that cover will be always obtainable." That, in brief, is the pith of the argument. And the masses listen and applaud, because, forsooth, these are questions for competent military men, which do not fall within the purview of the uninitiated!

Now it is permissible to ask, why was Lord Roberts' ingenious system not tested in the South African War? The British forces there have been for over two years in the best possible school of practice. They have had an unprecedented opportunity for assimilating the principles of this infallible system, which is to serve as the corner-stone of the future military organisation of Great Britain. Two years of incessant fighting ought surely to have afforded them ample training. The conditions for success are more propitious than they can ever be again, for the Imperial troops outnumber the Boers in the proportion of from 7 or even 10 to 1. If only 3 per cent. of the British forces are capable of learning and carrying out Lord Roberts' method-and if not the outlook is truly hopeless-then the war ought to have been over long since. For how many decisive victories should they not have already scored? Yet what do we behold? The open Sesame to success has had no effect whatever. The spirits having been duly called from the vasty deep, have not come when summoned. And if the system could not be applied when the conditions were exceptionally favourable, is it likely to work miracles when the obstacles increase a hundred-fold? In none but a Colonial or quasi-Colonial war can the English Army oppose ten men to one of the enemy; in no struggle with a Great Power can England reckon upon the blunders which undisciplined Boers have been committing week after week; in no other trial of strength will the economic machinery of the nation be so little affected as in that between two farmer Republics and the mightiest Empire of the world. Why, then, put off till to-morrow what could, and should, be accomplished to-day?

If Lord Roberts' recipe for attacks as decisive as the historic bayonet charge were what it professes to be, how came it that 6,000 Boers managed to improvise a position 20 miles long-with only about 200 men per mile defending it-with success, and to repel 12,000 trained British soldiers, as at Magersfontein? Where was the magic of the Field-Marshal's formula, when 20,000 British troops failed to drive out 5,000 Boers at Colenso? What broke the spell when a force 300 per cent. greater than that of the peasant soldiers, not only gained no decisive victory, but were driven back with a loss of nearly 2,000 men, as at Spion Kop? Why was no brilliant dash made, similar to that of the bayonet charge, when at Paardeberg 4,000 Boers were surrounded at first by 20,000 and then by 40,000 trained men, and yet held their own, until famine slowly effected what Lord Roberts' system should have accomplished by a brilliant onslaught? How came it that even then the British lost 1,400 men, while the casualty list of the enemy amounted but to 179? What enabled "four Boers posted in a good position to

hold at bay for two days nearly 100 men, while the commando to which they belonged were getting away with their wagons?"* Such are the results obtained in exceptionally propitious conditions. Is it unfair to ask: "If they do these things in a green tree, what shall be done in the dry?"

*** Daily Mail, 20th November, 1901.**

The truth is that those reverses were the effects of causes with which the initiative of the men engaged had absolutely nothing to do. Whether the soldiers are pushing, resourceful and self-reliant, or mere units in a machine worked by the officers, the position of an entrenched enemy will be equally strong, his invisibility will not be one whit less or more, the danger of advancing against him will be no wise lessened. Whether men be shifty or the reverse makes no difference to the bullet or to the man who aims it. To hope to cope with the effects of quick-firing rifles, smokeless powder, trenches and barbed wire entanglements by enjoining soldiers to be resourceful and self-reliant is as efficacious as it would be to wear an amulet in the hope of escaping death. And yet it is on such a delusion that the re-organisation of the British Army would seem to be based. The dilemma for present and future commanders is this: the enemy must be crushed by mighty masses impetuously dashing against him, or else starved out of his positions by dint of hunger. The former plan is impossible, owing to the murderous fire with which the strongly-entrenched and invisible foe can sweep the field; the latter is unfeasible, because it presupposes a numerical superiority such as a British army can never have over a non-Colonial adversary. The only way of escaping this dilemma is by frankly recognising the changed conditions of warfare, and by aiming at such ends as are still possible in spite of them.

It is obvious therefore that the aim which Lord Roberts desires to obtain cannot be compassed, and that the money and labour employed in its pursuit are thrown away. The British nation stands in no need of a substitute for the old bayonet charge, or of a means of putting a speedy end to war by a brilliant onslaught on the enemy. For she can easily put down colonial troubles without rivalling the military establishments of Continental Europe, and in a war with a Great Power her land forces would be as fine dust in the balance. The time has gone by for ever when they could turn the scale. What are a few thousand men-who must be well fed and well cared for-in the shock of millions of soldiers, who can live for weeks on hard black bread and for days on the reminiscences of it? A cheap efficient system somewhat on the lines of that which obtains in Switzerland seems far more suited to the needs of the British Empire. For the difference between the professional soldier and the amateur has dwindled almost to nothing in consequence of the new methods of warfare. Not that training has become superfluous, although the old system of training is certainly obsolete -but long service undoubtedly has. A glance at the experiences which the struggle still raging affords, demonstrates the truth of the proposition.

The barrier between the regular trained soldier and the quickly trained civilian has been broken down for good. "The professional soldier," Colonel May declares,* "cannot

longer claim that preeminence over the amateur which was once his. Modern improvements in firearms," he goes on to say, "have given yet a further impetus to the levelling tendency of our age, which does away with class distinctions, and makes every man as good as his neighbour. The civilian-soldier took cover more skilfully, and displayed a higher degree of individual intelligence," They showed themselves as independent as their officers, never panic-stricken as the regulars were at Stormberg, Magersfontein, and elsewhere. Kimberley and Mafeking were defended chiefly by civilians against forces proportionately much greater than those that attacked Ladysmith. Moreover, when the worst came to the worst, the citizen soldiers were less willing to surrender than their better trained comrades. Thus they defended Wepener most brilliantly under conditions very similar to those which led to surrender elsewhere. At Paardeberg, where the regulars had been driven back with severe losses from Cronje's trenches, it was the Canadians who delivered the final attack, which led to the Boers' surrender. In a word, the chronicles of the war abound in proofs that the civilian element was endowed with all the best qualities of the professional troops, their courage, their discipline, and with a higher degree of intelligence. The explanation of this phenomenon lies on the surface. On the contemporary battlefield the men must be scattered widely apart, and are very much left to their own resources. The tactics now taught at manoeuvres are useless in war. The regulars, therefore, who know no others, and who are trained to trust their officers instead of their own judgment, are turned into a mere crowd. The intelligent citizen, on the contrary, whose capacity for action has been sharpened by his habits as a sportsman, a farmer, an artisan, uses his faculties and fights without orders from above. The superiority of the Boers to the British regulars is to be accounted for in the same way.

*** "Retrospect of the African War."**

It naturally goes against the grain of professional military men to draw the practical consequences from this breakdown of their own class-prestige. They can hardly be expected to proclaim from the house-tops that the human war material, which they are turning out in limited quantities at fancy prices, can be produced of a much better quality, in large numbers and at far cheaper rates. Hence there is no attempt on their part to draw up a scheme adapted to the new state of things. But the Government and the people, who have to organise an efficient National defence, will probably hesitate before sacrificing Imperial interests to caste privileges.

In no country in the twentieth century should the question of modifying the National Army in accordance with latter-day needs be referred to the military alone. In bygone times this was a necessity, and not a very dangerous one. Wars seldom affected the entire population, and never to the degree by which peoples will be hurt by it to-day. The economic wheels of a nation's machinery are now connected with those of its military section, and the one will act and react on the other with surprising results. On this ground, even were it the only one, it would seem desirable to admit other factors to the Council Chamber. Military training loses in breadth what it gains in depth, and so

much attention is absorbed by special branches of the service that the officer rarely has any to spare for the study of other currents of the National life than that in which he himself is carried along. My own experience, which I give for what it is worth, tells me that the number of officers who know the new conditions of warfare, and realise their effects on tactics and strategy, their economic bearings, their political trend, are surprisingly few. In Great Britain, where militarism has never been rampant, professional narrow-mindedness is indeed less marked than abroad. Here there is a wholesome tendency to view current changes in correct perspective and at least to listen to non-professional views. In no other country, for instance, would it be possible for an outsider to receive an invitation to lecture before naval and military officers such as I had the honour to receive from the United Service Institution. I recognise all this with alacrity and pleasure. But, none the less, the fact remains, that while some of the essential aspects of the matter are necessarily outside the professional purview, the tactical and strategical consequence of the recent changes in warfare seem to be very imperfectly gauged by the most. Otherwise, it would have been impossible for the General Staff to have been so hopelessly wrong in their forecasts of the present war, to have put such obviously incorrect interpretations upon the events that belied their estimates, and now to set about making provision for the future as if these facts had no existence outside the brains of dreamy Utopists.

JEAN DE BLOCH.

SOUTH AFRICA AND EUROPE.

**BY THE LATE JEAN DE BLOCH, RUSSIAN
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"THE WAR OF THE FUTURE."**

No historic phenomenon is more remarkable than the persistency with which disastrous but avoidable events recur again and again, in spite of the warning which each generation of sufferers bequeaths to its successors. It is a truism to say that history repeats itself, and many take that proverb to imply that historic events, whether fortunate or disastrous, must inevitably reproduce themselves in every stage of social development, owing to a presumed identity of human sentiments, passions, and aspirations, in all ages. Others put the historic truth into the convenient formula, that human nature is unteachable. From the very dawn of history, unjust warfare, corruption, and religious and racial persecution have been ruinous to prosperous states; yet we find all these evils, with little diminished vigor, flourishing under various forms to-day. Yet, in reality, we cannot explain this fact by any such easy phrase as that "human nature is everywhere the same," or that "human nature is unteachable." The broad lessons of

history are, on the contrary, very well understood by all civilized peoples; the general agreement as to what those lessons are is, perhaps, the best proof of that.

The truth is that nations, when they embark upon some fatal policy-upon a disastrous war, which ruins them from outside, or upon misgovernment, which consumes them from within -do not do so because they are ignorant of the lesson of history that such courses are invariably followed by destruction, but because, under the influence of passion and of unwise counsel, they have become firmly convinced that their own case is exceptional, and excluded by some magic exemption from the operation of the historic laws which have been revealed by the history of the past. When disaster follows, the suffering nations still fail to recognize that their case was in no way exceptional, and that their misfortunes arose merely from inability to regard themselves objectively, as they regard other nations, both present and past. They refuse even to recognize the immediate causes of their disasters, and cast about them for far-fetched and improbable explanations. The French, in 1870, having entered upon a war without preparation, and having suffered the natural consequences, even went so far as to attribute their defeat to treachery. In like manner, the English, being unwilling to accept an ordinary explanation of the remarkable series of events which have hitherto characterized the South-African War, have fabricated an ingenious and wholly unnecessary explanation, which has shrouded in mystery the meaning of events which, in reality, are explicable in a perfectly simple manner. This explanation, which may be summed up in the words of its exponents, as "the peculiar conditions of South-African warfare," meets with universal acceptance in England, and there is a tendency to accept it among all peoples not openly hostile to England. Yet it is probable that no delusion was ever more threatening to the peace of mankind, for its acceptance means that Europe and the world will never learn a lesson the importance of which for the welfare of the world is incalculably great.

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It was natural that the nations of the European Continent, in their sympathy with the two republics, should seek to explain the defeats which the Boers continued to inflict upon the English even long after the regular Boer defence had broken down, by declaring that the English were inferior to the Boers in every military quality. It was natural, too, that English critics should refuse to admit the truth of this. Some other explanation had in the nature of things to be put forward. As I shall hereafter show, a very obvious explanation was to be found in the changed conditions of offensive warfare, which have resulted from the improvement of rifles and artillery, the employment of smokeless powder, and the more general adoption of the spade as an arm of the first importance. British critics, whether military or civilian, would, however, have none of this. Just as the French in 1870 raised the cry of "Treachery!" the British proceeded to fabricate a complicated network of pretended causes to explain why it was that the conquest of South Africa was necessarily accompanied by defeats and delays. The distance of the country from Europe, its vastness, its configuration, the difficulty of protecting communications, the sparseness of the population, the lack of a local food-supply, and a hundred minor

conditions arising therefrom, were the real causes, said the British apologists, of the British difficulties and disasters.

Now this theory is, on its face, very plausible; but doubt is immediately thrown upon it when we observe that, though all these conditions are permanent, and were well-known to every one long before the war broke out, they were never adduced beforehand as conditions likely to cause disaster, but were only brought forward after disaster had actually occurred. The doubt is increased when we know that, before the war, arguments of a totally different kind were employed to show that disaster would occur to the British arms, or to the arms of any other Power which should undertake an offensive war without an enormous superiority in numbers and resources. These latter arguments together make up the "changed conditions of warfare" theory, or, in other words, the theory which claims that, under modern conditions, the defensive possesses an inherent superiority, which can be overcome only by overwhelming forces.

The fact that this theory was broached before the war broke out, whereas the rival explanation of "peculiar conditions" was a belated afterthought, stands *primâ facie* in its favor. But the fact is that the British argument will not bear a moment's examination. I shall deal shortly with some of these explanations, to show how unsubstantial they are. Firstly, as to the vastness of the country and the consequent difficulty of guarding communications, we know that Napoleon marched all over Europe, and that history is full of examples of hostile armies traversing, again and again, vaster countries than the two South-African republics. Still more significant is the fact that nearly all the serious defeats sustained by the British took place at an inconsiderable distance from their base, and when communications were perfectly safe. The vastness of the country and threatened communications played no part whatever in the battles of Colenso, Stormberg, and Magersfontein. These factors had, of course, an enormous effect upon the strategical development of the war, and were largely responsible for its prolongation; but they did not affect at all the tactical conditions of individual engagements.

Still more strange is the assertion of British apologists, that the sparseness of the population was one of their great obstacles. The British enjoyed the advantage of being opposed only by a handful of Boers, yet their apologists fall into the inconsistency of wanting them at the same time to have whatever advantage attaches to campaigning in a thickly settled country! If South Africa were peopled as thickly as Europe, the British might have been able to live on the country, but they would have been opposed by several millions of men instead of fifty thousand. To claim, therefore, that the sparseness of the population was a "peculiar difficulty" of South-African warfare, while ignoring the advantage of having to fight a scanty population, is surely the height of absurdity.

Even the splendid climate of South Africa has been libelled as a "peculiar condition of South-African warfare." And so it is; but only in the sense that every climate but his own is a peculiar condition to an invader. The climate of South Africa differed from that of England chiefly in being drier, and therefore more suitable for campaigning; and for the British, who have fought in every country on the globe, to put forward such an

argument, only shows how great is the strain imposed upon the apologist. Similarly, we find that the configuration of South Africa is infinitely more open, and presents less obstacles to an invader, than any equal area in Western or Central Europe. Nor did the distance of seven thousand miles which separates the Cape from England play any considerable part, and it may be doubted whether the British could have sent their 350,000 men from London to Edinburgh with as little difficulty as they experienced in sending them from Southampton to Cape Town and Durban.

Now, the facts which I have pointed out completely destroy the value of the British explanation. Are we, therefore, to fall back upon the, Continental theory, that the Boers were in every way superior soldiers to the British? This theory is equally untenable. The earlier stages of the war disprove it. At these stages, the British were very considerably inferior to the Boers in numbers and, in some respects, in armament. Yet, despite their numerical superiority, the Boers, who, we are told, were superior to the British in soldierly qualities, never gained a real advantage over their enemies. The three unfortified towns against which they advanced in great numbers and in exultant spirits, held out triumphantly. Wherever the Boers attacked, they were driven back with heavy loss. It was the same at Ladysmith, at Kimberley, and at Mafeking. When reinforcements arrived, the British began a series of counter-attacks upon the Boer positions, and were repulsed as decisively. That neither side was successful in attack, though each was triumphant in defence, seems to me to be like the key of the whole situation.

The key of the situation, in short, lies in the fact that the South-African War confirms what had been repeatedly affirmed in advance by myself and by those authorities upon whom I relied in preparing my book, that "new conditions of warfare" had arisen, the main characteristic of which was that the strength of the attack, both physical and moral, had declined to an extraordinary extent since the last great war. It is impossible to explain in an article the basis of this theory; but it may be summed up by saying that the improvements in the rifle and in artillery, and the universal employment of field intrenchments, altogether operate to the advantage of the defensive. It is much less important to explain why this is so, than to prove that it was so; and I shall, therefore, give a short summary of the way in which the war vindicated the thesis.

It is necessary to premise that, although I have treated these facts in detail elsewhere, I have never before attempted to summarize their consecutive effect. It is not very easy to apply the canons of logic to an art so arbitrary as war, as to which there is so much in dispute; yet it is no exaggeration to say that nearly every individual event in South Africa either directly or indirectly proves the superiority of defensive warfare. Even those few facts which seem to prove the contrary, on examination are often the strongest bases of the argument. We now, for instance, that attacks sometimes succeeded; but we know not the less certainly that any such attacks were undertaken with unexampled superiority of numbers, or were accompanied by turning movements. We know, also, that the defence occasionally broke down, as did the defence of Cronje at Paardeberg; but we know that the defence broke down not in consequence of the effectiveness of

the attack, but owing to starvation and the hopelessness of relief, under conditions which would not be repeated in a European war.

I will take the question of reconnaissance first, since that, though not an arm of combat, is the most indispensable of the preliminaries to attack. Before the outbreak of the South-African War, I laid it down in my book, as the result of observation, that "smokeless powder, and modern arms and ammunition insure long ignorance of a defender's exact position, and in consequence serious loss before the true position is ascertained ... the period of uncertainty may cause immense losses to the attacker." This affirmation was based partly upon results observed at manœuvres in Europe, and partly upon the reports of the European *attachés* during the war in Cuba. It was in every way confirmed by experience in South Africa. The attackers were almost invariably in ignorance of the defenders' position, with the result that before the truth was ascertained they had suffered such severe losses as necessitated abandonment of the attack. At Stormberg, the British marched, in total ignorance, to within a few hundred yards of the Boer trenches, and in consequence were driven back in flight, leaving a third of their men in the hands of the Boers. The correspondents relate that, even after the Boers had opened fire, the British were totally unable to locate them. At Magersfontein, the experience of the attackers was the same. The Highland Brigade there lost a quarter of their strength in a few minutes, owing to their ignorance of the Boer position. All over the battlefield the British suffered from the same difficulty of locating their enemy. To quote the *Daily Mail* correspondent: "While the Highlanders were fighting on the left, the Guards advanced on the right across the open veldt, and fought an invisible foe for fifteen hours." At Modder River, and at Colenso, the defenders were invisible, and their smokeless powder gave no clue to their position. At Modder River we read that "most of the officers and men on the British side never saw a Boer, and were not even certain on which side of the river the Boers were."

This is entirely a "new condition of warfare"; and its effect is that the *sine quâ non* of attack, that the attacker should be exactly informed as to the defender's position, has been made unattainable under the altered conditions of war. I shall now attempt to show how the South-African War has shown a similar decline in the reliability of other auxiliaries of attack.

All tacticians are agreed that an infantry attack upon an intrenched position must be preceded by a vigorous artillery bombardment, the object of which is both to cause loss to the defenders and to damage their *morale*. Without this, it is agreed, no infantry attack can have the reasonable chance of success which is necessary if attack is to be undertaken. Now, the last great wars tend to show that the effect of artillery for this purpose is very much exaggerated. "At Plevna," said Todleben, "we would sometimes fire a whole day for the purpose of killing a single Turk." Since then, artillery has been improved enormously in range, accuracy, and explosive effect, Professor Langlois calculating that the guns in use to-day are forty times more effective than those of 1870. Yet, in spite of this, the lesson of Plevna was not only repeated, but emphasized, by the experiences of South Africa. Every one of the great battles of the South African War was begun by a heavy bombardment; yet in no case is there any record of the Boers

suffering sufficiently to shake their *morale*, much less to drive them from their intrenchments. At Enslin, two batteries of field-guns, and several heavy naval guns, bombarded the Boer trenches, until, to quote a correspondent, "it seemed impossible that any living thing could be left in them." Yet only twenty-one dead Boers were found after the battle, mostly killed by rifle fire. At Modder River, three thousand heavy projectiles were poured into the Boer position; yet the Boer Army held its ground, retiring later only in consequence of a flank attack. At Colenso, the British attackers had forty-six guns, and the Boers only twelve. The correspondents reported that the Boer position on Fort Wylie, "as the result of the exploding shells, looked like a volcano in full eruption"; yet the Boer guns on this very position were fought to the end. At Paardeberg, 4,000 Boers were shut up in a small space, and subjected for ten days to the fire of from fifty to a hundred field-guns, heavy naval guns, and howitzers, some of the latter firing 120-pound Lyddite shells. The result of this unprecedented bombardment was that 170 men were killed and wounded, at least half of whom suffered during the infantry attack which preceded the bombardment. The lesson of the war, in short, was that artillery was almost wholly ineffective when employed against intrenchments. That this was not due to any inherent defects in the guns, or in the manner in which they were served, is shown by the fact that the Boer bombardment of Ladysmith and Kimberley was equally without serious effect. It is also shown by another very striking incident. I refer to the ill-fated attack upon Spion-Kop, when the Boer artillery, employed *against the attacker*, put out of action in one night some 1,300 men. In this action, the British, owing to the stony nature of the ground, and the neglect to despatch an efficient engineering corps to the occupied position, were unable to intrench themselves. Hence the heavy losses, and the completed demonstration of the fact that, while the power of modern artillery is unprecedented, it can be used only with effect against an exposed enemy, or, in other words, against an advancing attacker.

It is, of course, argued by those who still believe in the efficacy of artillery in attack, that the effect of gun fire is chiefly moral. But those who thus argue forget that this moral effect is merely the consequence of fear, and that, when riflemen safely sheltered behind intrenchments, realize that they have nothing to fear from the enemy's guns, the moral effect upon them will be nil. This was the case in the Transvaal War, where the severest artillery bombardment never drove the Boers from their positions.

In these facts, which are not disputed (though attempts have been made to explain them away), we see another element in the increment of strength to the defensive. The complete failure of the artillery is, of course, entirely due to the more perfect intrenchments of to-day, and to the invisibility of those intrenchments, which results from the employment of smokeless powder by their defenders. Yet the British, in all these engagements, were enormously superior to the Boers in number of guns, and in supply of ammunition. In an ordinary war between Powers of equal or almost equal strength (the two alliances of Continental Europe for example), there will be no such disparity in armament or numbers. The defender will not only not be inferior in artillery to the attacker, but, more probably, superior, since the fortifications on the European frontiers are permanent and equipped with heavier guns than the attacker can conveniently transport.

If this be so, we must conclude that, in the war of the future, infantry will be required to attack without either the moral or material encouragement which was formerly supplied by successful artillery bombardment. This leads directly to the question of infantry attack under modern conditions, and here also we find a change entirely to the advantage of the defenders. In *The War of the Future*, I examined this question; and it seemed to me indisputable that, excluding accidental factors, a superiority in numbers which no European Power would be likely to possess would be required in order to carry out a successful frontal attack. Experiments made at my instance in Switzerland showed that theoretically this superiority would not be less than eight to one; and the studies of von Rohne and others led them to similar conclusions. Accidental circumstances play so large a part in any individual battle that it is, of course, impossible to gain any direct confirmation of these figures from single battles in South Africa. But the general experience of the frontal attacks attempted in Natal and in the Western Cape Colony shows decisively that an enormous superiority is indispensable, and that, even with such a superiority, success cannot always be relied upon. The one great instance of a Boer frontal attack in force (the attack upon Ladysmith on January 6th, 1900), resulted in total failure. It is necessary to cite this first, lest the objection be made that the British attacks, which I shall now deal with, failed only because of some inherent defect in British methods. These British attacks were numerous, and all resulted in total failures. The only battle of the war in which the Boers were really routed, as the result of a direct attack, was at Elandslaagte, where the British outnumbered the Boers by five to one, and carried out at the same time a flank attack. Attacks at Belmont and Enslin resulted in the withdrawal of the Boers from their positions in good order. But in every other case, the British frontal attacks failed, even when made by forces outnumbering the Boers by four or five to one. At Magersfontein, 13,000 British made an attack upon half that number of Boers, and were decisively defeated. At Colenso, 20,000 British attempted a frontal attack upon a fourth of the number of Boers and were defeated with a loss of eleven guns. At Paardekop, 16,000 to 20,000 British, with enormously superior artillery, attempted a frontal attack upon 4,000 exhausted Boers and were driven back with a loss of 1,400 men, the Boer loss being less than a hundred. The Boer loss in most of these South-African battles is not definitely known; but most reports agree that the intrenched Boers invariably lost less than a tenth of the number which they put out of action among the attackers.

All this confirms the belief, which is becoming more and more prevalent among military men, that the frontal attack, as a method of offence, is tending to pass out of practical warfare. The consequence in European warfare must be very great. The European alliances are equal in numbers and differ only in speed of mobilization. If the relations between attack and defence were now what they have been in the past, this difference in the rapidity with which mobilization is carried out would play a great, probably a decisive, part. But, in the words of von der Goltz, "the growing power of resistance of every military unit now enables a single division to accept battle with a whole army corps, if it be confident of reinforcement within a reasonable time." On the European frontiers, before the smaller forces of the slowly mobilizing Power can be driven from their positions, the slower Power will have completed the concentration of its troops, and equality will then be established. This conclusion is inevitably driven in upon us

when we consider the conditions of European frontiers, and the exceptional thinness of modern defensive lines. The French frontier, in case of an attempted invasion by Germany, is as good an instance as any other. The Franco-German frontier is only 160 miles in length, and it is studded with fortresses and anterior defensive lines, which arose as the result of the war of 1870-71. Within forty-eight hours, the French could concentrate upon this frontier a force of 300,000 men. That is to say, they would have an average of 2,000 men per mile for the entire frontier. Twenty years ago, such a line would have been thin to the point of danger. But the magazine rifle has changed all that. At Magersfontein, the Boers held all day an improvised position some twenty miles long with less than 6,000 men; that is, they had only 300 men a mile, sixteen times less than was formerly regarded as the necessary strength per mile. In the other battles of the South-African War, the Boer defensive lines were equally thin; yet, with the magazine rifle, they were always able to attain sufficient fire-intensity to defeat any attempt to break through their lines. At Waterloo, the British had more men concentrated on *two* miles of defences than the whole Boer Army; yet their fire was not sufficient to prevent the French reaching close to their lines, and in some cases even penetrating them. With the modern rifle, however, we find 300 men per mile developing an intensity of fire sufficient to decimate any body of troops attempting to approach in close formation. It must be concluded, therefore, that the 2,000 men per mile which the French, immediately upon the outbreak of war, could throw upon their permanently fortified frontiers, would constitute a defence formidable enough to baffle any attempt to break through in the short time which would elapse before the arrival of reinforcements.

This, it seems to me, is the chief tactical problem presented by the failures of infantry attack in South Africa. The facts cited undoubtedly lead to the conclusion that, as in the case of artillery, modern improvements in infantry weapons have altogether favored the defensive. I shall not attempt to deal here with the complex and disputed question of the rôle of cavalry in attack. But cavalry, or rather mounted infantry, had an enormous importance in the carrying out of the indirect offensive in South Africa, so great indeed that many European critics pretend to see in the new arm of mounted men who fight on foot a solution of the vexed problem of the difficulty of attack, and a counter-agent to the defensive advantages which result from the use of improved firearms. In the later stages of the war, after the first defence of the Boers had been down, Lord Roberts employed vast numbers of mounted men in his attacks, and the system adopted had a considerable, though limited, success. The British commander engaged the enemy with infantry and artillery in front, and despatched his mounted men to threaten their flanks. As the Boers were always from five to ten times less numerous, this system, of course, proved efficacious. But, though the British invariably forced the Boers out of their positions, they never succeeded in scoring the decisive success of cutting off their retreat. The Boers not only withdrew in safety, but took with them their slow transport and position guns of a weight never before employed in the field. This fact is, perhaps, the most important of all in the interpretation of the South-African War; for it shows, as will be seen, that, under modern conditions, even if attack should succeed, the defender has opportunities for orderly withdrawal which he did not possess in the past. Fifty years ago, the defenders, instead of being forced slowly from their positions and left to retreat almost unmolested, would have been routed at the point of the bayonet, cut to pieces by

the pursuing cavalry; their guns would have been captured, and, a great part of their men killed and taken prisoners. But owing to the immense distances between the combatants in the South-African battles, it was constantly found that, before the attacker's cavalry had ridden far enough to threaten the defender's rear, the horses were so exhausted that effective pursuit was out of the question. This change eminently constitutes a "new condition of war," for it results from a new factor--that is, the long range of modern rifles and artillery. Like the other changes enumerated, it is decidedly to the advantage of the defender; for while, in case of defeat, it insures him against rout and destruction, it offers no counterbalancing advantage to the attacker. The range of rifles, and the endurance of horses are, moreover, not accidental or temporary factors, and will work out their results in Europe no less certainly than they did in South Africa.

It should be added, however, that the limitations of cavalry in the offensive, which were shown so plainly in South Africa, must be even more marked in any European war. In the first place, there will be no initial superiority of numbers such as there was in South Africa. In the second place, the continuous fortifications upon all the European frontiers make it almost impossible even to attempt those flanking movements for which mounted men are so eminently fitted. There is no single point upon the French frontier where a German army, mounted or unmounted, could turn the defender's lines. The whole frontier is lined with continuous fortifications, which must first be carried by direct attack - a method which would almost certainly fail. There are, indeed, two considerable gaps left in the lines of defences, but these gaps have been left undefended on purpose, and are so situated that any attempt to enter them for the purpose of turning the French rear would inevitably result in the invaders being cut off from their base and captured. But it is hardly necessary to discuss a contingency so improbable. It is sufficient to point out that all successful turning movements in South Africa were carried out in a flat, unfortified country, with a superiority quite inconceivable in Europe.

In view of the purely tactical character of all these factors, it is an absurdity to pretend that they do not teach a lesson to the whole world. Their applicability to the military conditions of modern Europe cannot be disputed. The Great Powers of Europe are today divided into two armed camps, each camp differing hardly a hair's-breadth in the sum of its numbers, armament, efficiency, and national spirit. On the frontiers rise impregnable fortifications, executed on a scale and with a completeness unknown in the past; and between ancient enemies stands the invisible wall of an enhanced defensive, which, arising from human progress itself, shows no practicable opening for human assault. By these changes, we are brought face to face with the practical disappearance of war from one of its most ancient domains. For can it be conceived that any statesman will be so blind, or any mob so passionate, as to rush into a struggle whence neither valor nor genius can draw any compensating result? Be it added that, happily, there is now no question pending in Europe likely to provoke acute enmity. Dynastic and religious wars are things of the past. Frontiers are everywhere sharply delimited, if not exactly according to racial divisions, at least more closely corresponding to that ideal delimitation than they have ever been before. On the Continent of Europe, even rumors of wars have passed away. In the decade of 1880-1890, seldom a month passed without rumors being published in the European press, on apparently good authority,

that France and Germany, or Russia and Germany, were secretly mobilizing with a view to immediate hostilities. Such rumors are seldom heard to-day.

It is argued, with apparent plausibility, that all conclusions as to the impracticability of war which are based upon equality of numbers, training and armaments, are unreliable, because they leave the undetermined human factor out of account. I remember once discussing this problem with a professor at the French *École Militaire*, who put the obvious objection in admirable form. He says:

"Suppose you are right as to the equality of the European alliances. Assume, if you will, that numbers, armaments, training are in the sum total practically equal-that does not necessarily imply that neither side can win. In these great organizations, apparently so equal, there is an infinite ground for dissimilarities of much greater importance than mere inequality of numbers. There are varying degrees of faith in the justice of one's cause, confidence in ones leaders, historic influences, and individual genius -the possibility of a great commander coming to the front under the stress of events. All these factors may favor one army, which in outward appearance enjoys no superiority. Finally, there is Accident. The interception of a despatch, the wrecking of a train, a sudden fall of snow, a stray bullet killing a trusted commander, the late arrival of expected supports, the inexplicable panics which set in without cause - all these accidents have made history in the past, and in the future any one of them may turn the tide of an otherwise indecisive combat. War has always depended upon accidents as much as upon acts, and it will continue to do so.

This argument expresses admirably the objection to the thesis that the mechanism of war has perfected itself beyond the verge of practicability. It is not, however, difficult to find an answer. If war does break out, the human factor and the factor of accident will undoubtedly play a considerable part. But there are reasons why they cannot play such a decisive part, as they have often played in the past. The law of averages applies in all human affairs. If two men toss pennies half a dozen times, one may possibly win all six. But if they toss a hundred times there is no human possibility that one will win all hundred; it is a hundred to one that the winnings will be fairly equally divided. This may be taken as a parable to illustrate the part which accident is likely to play in the prolonged and complex warfare of the future. A hundred years ago, a single victory, the fall of a single fortress, was often sufficient to determine a war. But with the numerous and vast armies, the endless and repeated defensive lines, and the inexhaustible reserves of modern Europe, a single battle decided by a single lucky chance cannot have a decisive result. There will be innumerable battles, innumerable fortresses to be besieged, and scores of armies operating and cooperating. In such circumstances, accident may play a correspondingly great, but it will necessarily be an equal, part. An intercepted telegram, or the late arrival of supports, may decide one engagement; but they cannot materially influence a whole war. It would require numerous favorable accidents to end it. And, just as in tossing pennies a hundred times, there is in the complex warfare of modern times no possibility of a sequence of accidental circumstances favoring one side.

But, even if the gambler's chance could determine a conflict, as it sometimes did in the past, we have in the facts above mentioned an excellent reason why peace is likely to be kept. No statesman ever went to war relying upon chance alone. Wars are determined upon because the determining nation is convinced of the superiority of its

numbers, the better training of its men, the perfection of its armaments-that is to say, it is assured of its superiority in those factors in which we know that no superiority at present exists. Nor can statesmen go to war any longer with a light heart, trusting to the genius of a proved commander. Since the passing away of the great captains of 1870 and 1877-78, no country in Europe can claim the superiority which rests upon the possession of a great captain. Moltke, Blumenthal, Gourko, and Skobelev are no more. Their successors may be as great as they, but their names and their country are yet unknown. They can be proved only by events; but, so far as the calculations of statesmen go, they do not exist.

There is, happily, another reason why war upon the European Continent is unlikely to break out. That is the extreme caution of modern European statesmen, their distrust of popular agitation, and their nervous dread of responsibility. The Transvaal War, in this respect, has taught to the world a lesson incomparably more valuable than even that military lesson which I have attempted to indicate. From its beginning to its present uncertain stage, it has been a continuous and uninterrupted exposure of the vanity of complacent thoughts which, the proverb tells us, are the children of vain wishes. Not merely every military, but every political, every social, every material, every spiritual consideration relied upon, and trumpeted abroad in premature puffs of victory, has been found to be a baseless edifice, which the first breeze of actual fact has overthrown. The collapse of the airy castle of Imperial France, thirty years ago, was not more instructive. There the lesson was sudden. In South Africa, however, delusion has followed delusion, and the wreck of each has hardly been complete before another has been planted on its ruins. It is the soldiers and statesmen, not the visionaries and philanthropists, who, have been led astray by dreams. Can it be believed that, with the lesson before their eyes of this general ensnaring of the intelligence of the most practical people in the world, the more cautious and responsible statesmen of Europe will lightly enter upon a war so vast and so terrible that all the incidents in the bloody struggle under the Southern Cross would be crowded into a single one of its battle-fields? The answer to that question lies in the nervous distrust of themselves, and the still greater distrust of popular agitation, which characterizes all the present rulers of Europe. An infinitesimal risk of diplomatic friction is sufficient to prevent decisive steps being taken in international matters, even where great good might possibly result from an active policy. The impassioned movement which is still proceeding on the Continent for intervention on behalf of the Boers, has never altered a word in diplomatic despatches. Astute statesmen preferred to employ the agitation for their own ends, and to deprecate it good-humoredly when it threatened to become dangerous. They know that a single word addressed by Napoleon III. to the Austrian Ambassador was sufficient to convince Europe that war between the two Powers was imminent, and that by convincing Europe, it actually made war unavoidable. The *status quo* has now become a religion in Europe. Everywhere there is a fearful, almost superstitious, dread of uttering an unconsidered word which might alarm foreign suspicion or pander to domestic passion. Even the Armenians must be abandoned to their fate, lest some inconsiderable element of friction should disturb the placid relations of the European Powers.

All this, it may indeed be urged, points to the postponement of war rather than to the assurance of peace. It indicates no lightening of the burden of armaments, and offers, at best, but the lesser of two evils. Therein lies Europe's danger; and it may indeed be doubted whether sudden destruction in the cataclysm of universal war is less to be feared than the continuous decay of the social organism, the shackling of civilization, and the ultimate political revolt which Militarism must bring about. But, if war be only deferred, it can hardly be doubted that social enlightenment will end in the decline of Militarism. Other evils as great have passed away. Belief in the permanence of any evil institution means despair as to the continuity of human progress. Militarism has been heavily shaken by the events of the South African War. The decline has already gone so far that its adequacy, even for the purposes for which it is intended, is a matter of doubt among soldiers themselves. A comprehensive inquiry into the whole subject is the best way to bring about reform; and if such an inquiry were carried out by a Commission representing men of science and men of affairs, as well as soldiers and politicians, there can be little doubt that the trembling basis of a pretended necessity upon which Militarism rests would be swept away, to the great benefit of Europe and of the rest of the world.

JEAN DE BLOCH.