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K.C.B.

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INFANTRY IN A NEW CENTURY.

*By Colonel the Right Hon. Sir J. H. A. MACDONALD, K.C.B.,
Brigadier-General Commanding the Forth Infantry Brigade.*

Wednesday, 6th February, 1901.

Colonel VERNOR CHATER, late Commanding 25th Regimental District,
in the Chair.

ONE of the greatest masters of the Art of War, von Clausewitz, in a terse sentence, expressed a great truth, which has been too often forgotten in the training of soldiery. That sentence is, "Theory should, by lucid and rational criticism, prevent peculiar methods from outliving themselves."

It is in the case he was dealing with—that of military affairs—that the tendency to stereotyped procedure is most strong, particularly when a long period of peace produces a soporific effect. Thus it comes about that when war, which always drops like a bolt from the blue, suddenly calls upon the soldiery to show what his peace training has taught, too often armies have to pay in terrible losses, both of men and battles, for the failure of enlightened theory to keep a firm guiding hand on practice, compelling it to change its methods, as circumstances in which they are to be applied become changed from whatever cause. Maréchal Saxe says of the Romans that "they always gave up their usages as soon as they had found better ones." This was one of the great secrets of their success, a faculty for adapting their military methods to the conditions, instead of worshipping the fetish of form with closed eyes. The great Napoleon laid it down as an axiom that the detail of tactical working would change about every 10 years.

The procedure of most countries, and particularly of our own, has been too often quite unlike what these great authorities have expressed. The late Commander-in-Chief, speaking in this Institution very many years ago, said that "It had apparently been our practice in formulating our drill, to go upon the notion derived from old historic battles, and to create a system of drill to meet the circumstances and exigencies of this imaginary battle." He stated that his "view of drill would be exactly the reverse of that process. I would find out what does take place in action—I would find out exactly what an action is from the very first moment a shot was fired, until the position on either side is stormed and taken. I would find that out . . . and then work back from that. . . ."

You have to accept certain difficulties ; work back from those difficulties, and try to take the sting out of the disorder we know to be inevitable, and, working back from it, deduce laws from it, and formulate your drill from them."

Our tendency has been during long periods the reverse of this, and rather to give the go-by to the consideration of new conditions, calling for new or improved instrumentality. It has been the common practice to ignore the fact that that which was done in the battle of a long past yesterday cannot be done to-day, and that what could not be done in that yesterday can be done and must be done to-day. Enlightened theory, grasping the lessons of practice, and foreseeing the effect of coming change in weapons and their power, was smothered in the wet blanket of official stolidity. The fascination of the existing forms and the easy conservatism which holds that "what was good enough in the Duke's time is good enough for me," combined with the sloth begotten of a long peace, found us in the middle of the century little further forward than we were in the time of the Napoleonic wars. Take an example. The rifle was a well-known weapon early in the century, and we had our Rifle Brigade under Wellington. Enlightened theory would have realised at once that the general introduction of rifled fire-arms would increase the power of armament enormously, and would have seen that if rifling improved small arms, it followed that it would give greater efficiency to guns as well as to the infantry weapon. The theorist had seen this 150 years ago. There was one Robins, who in 1747 wrote thus: "Whatever State shall thoroughly comprehend the nature and advantage of rifled-barrel pieces, and having facilitated and completed their construction, shall introduce into their armies their general use, with a dexterity in the management of them, will by this means acquire a superiority which will almost equal anything that has been done at any time by the particular excellence of any one kind of arms."

Here was a man before his time, and one can well imagine how the military Pharisee of that day brushed him aside, as the Pharisees of old drove out the man who knew and told them of a great thing done, saying, "Dost thou teach us?" The contrast to this prescience of poor obscure Robins is to be found in the short-sightedness of the words of a great warrior already referred to, namely, Saxe; words which were quoted with approval fourteen years before the battle of Waterloo by a learned writer in this country, who gravely expressed the thought that the cross-bow and pike were weapons "not wisely laid aside." Saxe's words were, speaking in contempt of fire-arms, *qui font beaucoup plus de bruit que de mal*—make much more noise than they cause injury. We laugh at the Chinese, who, having had gunpowder far longer than ourselves, still train troops to the bow and arrow; but in degree we, too, have been fatuous in our time. Only in the fifties did the brass gun with its short length and smooth bore, and Brown Bess with her erratic round ball, give way to what science had preached for in vain more than a hundred years before. It may illustrate practically the truth of the assertion that we are slow to adopt a good thing if I mention two facts. One is that there was found in ploughing up the

field of Culloden a revolver pistol on the Colt principle; and the other is that I saw in an old country house in Cumberland, laid as a curiosity on a deep window sill, a weapon dating 200 years back, in outward appearance like the old blunderbuss, with the thickening out of the metal near the muzzle, but the bore of which was hexagonal, and had small lands in the angles, exactly the same in principle as the Whitworth rifle of 1858.

It is in regard to the tactical detail and relative training applicable to the infantry branch of military service that the tendency to viscosity in the flow of ideas has been and is the most injurious. It has been so more or less in the case of all European Armies from the time of the great Frederick, and in our own time from the Austro-Prussian war in 1866, when it first became manifest that the rifled weapon made the processional mode of movement, and the moral effect of external arrangement in closely dressed serried form, no longer applicable as a moral factor, and the shoulder to shoulder boring down tactics no longer a practical factor, in the combat. Yet even the victors in that war were slow to learn the lesson till the loss of 6,000 to 7,000 men in a quarter of an hour at St. Privat, on ground with not more than a mile of frontage, gave a lesson that could not be forgotten, and drove the Prussians to improvised modes of action, which it was well for them were to be applied against badly trained and ill-organised troops. Thus a makeshift was forced upon authority, because authority and sound theory had not got *en rapport* in the reflecting time of peace, which is the time, and the only time, in which they can operate together to the best results.

It is in the case of the infantry that authority is most prone to frown upon the suggestions of theory as "new-fangled nonsense," and upon the man who entreates authority to look ahead, and see what must be provided against, and how it is to be done, as a faddist and a bore. The truth that the principles of tactics are unchangeable is distorted into the illogical corollary that tactical detail operations must be stereotyped. In what are called the scientific branches of the Service it is not so easy to follow frowning tactics, when detail change is pressed on authority. The inventor who has a good thing in weapons, or ammunition, or special explosives, or some important element in equipment or munition, is a gentleman that must be reckoned with. It is easy for authority to pigeon-hole the suggestions of the eager foot-soldier, desirous to improve the infantry machine, and adapt its working to the requirements of the modern combat, and it is natural to think lightly of what comes from a regimental officer, or a volunteer. But a Hiram Maxim, or a Professor Abel, or a Nobel, cannot be treated in that light fashion. If he has a good thing, his market is not limited to Pall Mall. It is with him as with the repulsed pedlar in the story, who said: "Then if you won't, another will." And there is the spectre ahead of a series of enquiries in the House of Commons. This is the kind of question that appears upon the paper—"To ask the Secretary of State for War whether a Birmingham invention known as Bomber's automatic shell-burster has been offered to and accepted by the War Departments of two Continental Powers, and will he inform the House whether this invention was tendered as a

secret communication to the Ordnance Department, and whether it was rejected, and if so, why?"

The poor infantry has no such protection as this. The sphere of invention in tactical handling of the infantry must remain in the region of theory. Maxim, Nobel, and Abel may show effectively what they can do with artificial earthworks manned by dummies, but the theorist in infantry work cannot exhibit the effects of his invention until he is provided with real enemies that it is legitimate to riddle, after he tactically gets at them, or while they are trying to get at him, as these scientists riddle the dummies. And the Secretary of State would be sure to get ready answers through the Intelligence Department if questions were asked. One can imagine him gravely reading a slip taken out of his dispatch-box: "In reply to the honourable and gallant member, I have to say that the system in question was considered by the military advisers of the Department, but in consequence of the recent publication by a distinguished foreign officer of a remarkable paper entitled '*A Midsummer Night's Dream*,' in which the abandonment of fighting in extended order is demonstrated to be right, and also of the fact that at the recent French manœuvres large bodies of men in close formation were employed in attack in the open, it has been officially decided that, with all deference to Field-Marshal Lord Wolseley and Mr. Archibald Forbes, 'shoulder to shoulder' is not dead."

If in the new century this country is to make the advance it should in developing the efficiency of the British infantry, and if that infantry is to be as it should be, and as in former days it was confessed to be by our enemies, by the mouth of Marshal Bugeaud, "the finest infantry in the world," two things are essential: first, that earnest thought and study be given to the war questions of the day by earnest soldiers and by earnest students, whether of the Regular Army or not; and, secondly, that the official mind should be as fully and formally directed to the consideration of the problem with all the light that can be got upon it, as that official mind is accustomed to consider with studious experts the scientific inventions to the destructive power of which the infantry must expose themselves. Without these two things, no real progress can be made. And it is for that reason that I have dwelt upon the past, to endeavour, if possible, to convince the official mind from the lessons of history, that the failure to act on von Clausewitz's maxim has done incalculable evil in past days, evil which has caused much loss in blood and treasure and prestige.

The first thing to be done is to formulate, as exactly as possible, the present conditions, that it may be seen wherein they differ from those of the past.

The principal conditions of the modern combat in relation to infantry, are:—

1. The fire-swept space, measured by miles in the case of artillery, and by much more than a mile in the case of small arms.
2. The location of the fire—both in distance and laterally—made difficult by increased range, and often impossible by the use of smokeless powder.

3. The speed of fire increased in a proportion of at least 6 to 1.
4. The possibilities of accurate fire with all fire weapons increased in a very great degree, both by the excellence of the weapons and ammunition, and the improvements in range-finding and sighting appliances.
5. The more effective character of fire from the flattening of the trajectory of all arms, and from the improvements in speed of fire and destructive power, and in the case of the artillery from the development in shell design and explosives.
6. As a result of the changes in weapons, protracted fighting in the preliminary stages of the combat, at distances at which the *personnel* of the troops engaged is not effective as a moral factor, in contrast to the old days in which the engagement did not begin until the opposing forces were at a short interval, so that appearances were a potent factor. Marshal Bugeaud describes the sight of our troops, silent, and from their steadiness like a long red wall when the enemy was only 300 yards off, producing an ardour-cooling effect on the French soldiery advancing with shouts of "*Vive l'Empereur—en avant—à la bayonette.*" All this moral effect by outward appearances is gone for ever.
7. Impossibility of the movement of troops being conducted by the set word of command of officers in high rank commanding several hundreds of men, combined with the fact that as smokeless powder makes the locating of a force difficult, loudly-shouted words of command may reveal the position of troops, which it is important to conceal.
8. Great increase of physical strain, in consequence of the long space to be covered by troops under fire, and the protracted character of the fighting in which enormous quantities of ammunition are expended.
9. Great increase of moral strain caused by the protraction of the severe phase of the combat, combined with concentrated losses, without that power of immediate retaliation—retaliation seen to be effective at the moment—which is always an important inspiring element in all contests of force.
10. In consequence of these stresses, difficulty in maintaining effective, controlled, and regulated fire, and disciplined action on approaching to and at close quarters.
11. The certainty that, at and after the decisive moment, and at the very time when well-prepared counter-stroke will take effect, there will probably be a confusion of units far greater than in the days of short-range combats.
12. That unless efficient means are found for providing ammunition supply during the engagement there may be failure, excessive loss, and capture, where there should have been success.

In stating these heads, I am open to the charge that little or nothing is being brought forward in the list which is not known already. I admit that. But it is important to gather these things to a focus for purposes of general view; and, still more, it is necessary to keep on emphasising them, because, although they may have taught their lesson, there are many signs that the lessons are not in all cases receiving effect. All these things were true in a certain degree for the last forty years. But even twenty years ago what practical heed had been given to them in the daily routine of infantry work? *Fas est ab hoste doceri*. Let me take the words of a Boer who fought against us in 1881, and who in friendly conversation in a much later year told of his experiences, and expressed his views as to our prospects if we again came to blows with him and his comrades:—

“The red-jackets left their white tents in the morning about 9 or 10, after they had had their breakfast, and formed up. Their red coats could be seen by everyone, their bayonets glittering in the sunshine. The surveyors went and measured out spots where they had to stand in lines; and then they formed up, every man straight. The adjutant came and cocked his eye down the ranks to see that no one was an inch behind the others. They numbered, and the colonel rode up. The colonel was on a fine horse, and had a beautiful sabretasch. ‘Men,’ he said, ‘you see those rocks. The enemy are behind them. You are to go and drive them out.’ They marched up in rows. They cheered. All this time we were sitting quietly smoking. As they got near, the commandant called out, ‘Men, defend yourselves.’ Then we put our gun muzzles from behind a shelter of rocks, took aim, and picked out the officers, and fired. . . . We just picked off all the leaders as they came up.” Then the Boer expressed how “greatly we admired the bravery of the English officers. . . . To us such bravery is marvellous, we cannot understand it; but it is not war.”

Now, is there anything unjust, anything improperly sarcastic, in these statements? I cannot think so. I have seen at manœuvres in this country, much later than the Boer war of 1881, many instances of the same blind adherence to parade forms, where they had no application. Not more than a dozen years ago I was put in command one day at Aldershot of a mixed force, which included a battalion of a Line regiment. The force was retiring by orders towards a fortified position. When ascending a bank, covered with bracken, waist-high, this battalion, which was retained for reserve purposes, was directed to line the bank at a place selected because there was a turf wall which would enable it to hold on, and cover the retreat of the fighting line, the ground being so steep that tiers-fire was appropriate, and the turf forming a ready-made and efficient shelter-trench. I turned round to attend to something else for the moment, and on turning back, saw, to my intense amazement and disgust, a string of markers out, some in front of the wall, some behind it, and one on the top of it, and the battalion carefully dressed among the brackens, and left standing upright, so that half of it formed a beautiful red streak against the bank that could be seen a mile off, and the other

part which was behind the wall was dressed so beautifully straight that two-thirds of it showed above the turf. I am thankful to say that I have completely forgotten the number and the territorial name of that gallant corps, and if I did remember it I would cut my tongue out rather than divulge it. The scene was a ridiculous one, but it was painfully typical of a system which had become crystallised, and the blame should fall on that, and not on those who were carrying it out in excessive conscientiousness. But unlike the cavalry charge of old, it was, while certainly not *la guerre*, in no sense *magnifique*. It was barrack-square gone mad—a very gross case, but a specimen of one of the effects of our system of drill, and the way in which it was carried out under our mode of inspection.

The truth is that those who had to do with the affairs of the infantry were for generations dealing with conditions in which the glue-pot principle was the dominant factor. The effort was to produce the solid, rigid article—as von Clausewitz expresses it, “held together merely by the glue of Service regulations and a drill book”—as the carpenter, supplied with plenty of glue and nails, can make a broad rigid front out of narrow planks. Solidity, density, rigidity were the aims in building up the infantry unit. I find in the *Military Journal* of 1799 infantry described as “a solid, close body which sustains itself by the density of its several parts,” and so late as 1825 a very able military writer uses the words “steadiness, solidity, and compactness,” and declares these to be “the true and only strength of the infantry,” which was spoken of as “not altogether without mobility.” All this was true when it was written, and would be true now if the conditions were the same. It is now the exact opposite of what a true description of infantry work would be. The conditions, as we have seen, have totally changed. But while the conditions have changed, there has been much sluggishness in adapting the training to the conditions. Tradition has dominated where enlightened theory should have pressed its case upon every thinking mind, so that it could not be gainsaid or resisted. It is a curious feature of our national character that it contains two elements which are in very marked contrast. We have an instinctive detestation of change, except in ladies’ fashions, and in military tailoring and hat designing, while we have a marvellous power of adaptability when change is forced upon us. One of the most satisfactory features of our national character is, that the evils of the former idiosyncrasy are so often modified by the power contained in the latter. The evils are great, and do much harm, but our adaptability, and the cheerful way in which we acquiesce in the excellence of what we formerly denounced, when we have to assimilate it, is very remarkable. There is a very amusing instance of this to be found in the case of our Infantry Drill in recent times.

In 1872 the following words were published as regards infantry movements :—

“Each man should move perfectly freely, and have fresh air on either side of him. And instead of forbidding the swinging of the disengaged arm, it should be made the rule.”

Well, they say that everything comes to him who knows how to wait. The first thing to be done was to persuade authority to give an interval between files in the ranks, to free the body, and give circulation of air, and, above all, to make the soldier feel himself a unit, and not a plank glued into a palisade, an unintelligent look-straight-to-your-front automaton, in which any natural mode of action was a crime.

After much pleading by Sir Lumley Graham, commanding the Royal Irish Regiment, and others, as well as myself, marching with an interval was tried at Aldershot by two regiments in my lamented friend General William Fielding's brigade, under the command of Sir Archibald Alison. They both spoke to me in private of the unmistakable success of the experiment, and I remember saying to them then in 1883, "I have seen to-day part of what I have longed for since I was at Salisbury manœuvres in 1872, and in the words of Napoleon's veteran at his tomb, 'I shall die content,' the rest will come sooner or later." Authority then proceeded to crush the improvement. Strict adherence to the Book was enjoined, military newspapers jeeringly announced that what they called "wet-paint interval," had received its quietus for ever. Officers expressed to me their regret and spoke despairingly. I did not despair. I told them that no real change in the Drill Book took less than a quarter of a century to work itself out, and they must wait. I knew there were those in the Army who saw, and that those who were blind would pass away. First came the abolition of touch. Then, as was inevitable, the wooden arm was abolished and the natural arm restored, and the march at all times became what it should be when the palisade formation has given way to the effective fire formation, when room is given to the soldier, as Sir Lumley Graham expressed it, "to use his arms and legs to the greatest advantage," leading, to quote the Archduke John's words conversely, to the production of "the living organism" instead of a "machine-like Army." Of course the opponents assured us that troops could never march accurately without touch, which, of course, was nonsense, and that every sort of looseness and failure of discipline would result from allowing the soldiers' march to be according to natural action, and not as in a cramped and unpractical exercise. They were deaf to all argument. But *magna est veritas*. The contest is over. The march of the British soldier, and indeed of the soldiers of Germany, and France, and Italy, is now an interval march, with free swing of the arm, the embodiment of individuality in disciplined and intelligent unity of action. That it will remain so is certain, for all that was in use to be said against it, was unwisely said, and is now unsaid. There was no more bitter opponent of these changes than that very influential military paper the *Army and Navy Gazette*, from which I quoted the phrase "wet-paint interval," used in supreme contempt of the proposal to give soldiers free use of their bodies in the ranks. I now take that journal as a witness. At last, an order was issued for all drill to be done with an interval, and with the disengaged arm swinging in rhythm with the step. For the first time, and after very short practice, this was carried out at the Trooping of the Colour on the Horse Guards' Parade on the Queen's birthday in 1896. What said the *Army and*

Navy Gazette, with that display of short memory, so characteristic of journals, and most of all of military journals? "The men stepped with an elastic springiness and a freedom from restraint, with a high step and a smart swing of the disengaged arm, that was exceedingly fine. Indeed it would be difficult to find such marching anywhere else."

After the short but pithy commination service of 1883 in the same print this utterance is good. "Elastic springiness" is good, "freedom from restraint" is good, and "smart swing" is good. When your words have to be swallowed, it is best to do so as if you liked it. There was little of elasticity and plenty of restraint about the touch march, and a swing instead of being smart would have condemned the delinquent to extra "drill till further orders" for unsmart and unsoldierlike conduct.

Surely the time has come, after all that has happened within the last 15 months, for a final endeavour to construct an Infantry Training Book which shall be free of what practical soldiers must know has no longer any applicability to the time and the circumstances. May we not ask that in a new century we shall not be left to rattle the dry bones of what has no longer any of the soul of war in it? Is it too much to expect that there be an end once and for all to tinkering, and that the best men that can be found be put to the task of framing a system of infantry training, which shall no longer contain what Rogniat calls *une abondance stérile* of useless exercises, what the late Field-Marshal Sir Donald Stewart called "useless lumber," and the late General Gordon called "rubbish." General Gordon's words are pithy, and therefore I quote them. Writing to a friend regarding the training of an infantry force, he used these words:—"All rubbish of goose-step—right-face, left-face—in which our Army drills delight, should be left out."

The goose-step is still with us. It is about the best specimen of the military fetish that exists; a lamentable instance of unenlightened idol-worship. I daresay the proposal to cut it absolutely out of the Drill Book will make "each particular hair" of many a barrack-square devotee stand up in holy horror. His Koran says that "The object of the balance step is to teach the soldier the free movement of his legs, preserving at the same time perfect squareness of shoulders and steadiness of the body. No pains are to be spared to attain this object."

The theory was that men should march with a body, head, shoulders, chest, trunk, and arms immovable, carried on legs, the feet of which came to the ground, heel and toe together. This was one of those traditions coming down from slow march days, when what might be true of very slow marching was unscientifically asserted to apply to ordinary practical movement. It was nothing short of absurdity to state—as has been done for probably a century or more, and is still stated in the Drill Book—that any such thing is part of "what forms the very foundation of correct marching," unless marching means something contrary to natural laws of locomotion. Yet it was thought that no greater heresy could be propounded than to say that in marching, as in walking naturally, the heel comes to the ground first. Drill experts would tell you no—that their mode of instruction was intended, and was successful, in bringing

the foot into a position parallel to the ground and putting it down in that position, and that to do this was the only way of using the limbs that was right. Any scepticism on this point was met with a smile of pity at the ignorance displayed of military matters. They had been taught to teach that. It was good discipline to accept what they were taught. They taught it in their turn, and they believed what they taught. It was a blind obedience, for what they believed was false. The demonstration of its falsity is unanswerable. In the play of the "Octoroon," where a crime is proved from a camera plate, the estate overseer truly asserted that "the apparatus cannot lie." It cannot, and when photographs came to be taken in most minute fractions of a second, it was at once seen that many accepted theories about the motions of animals, including man, must be rejected. I have examined very many photographs and reproductions of photographs of soldiers marching either on the road or in marching past on the parade ground—including pictures of the Guards, the models for the Army. In all these the theories of the goose-step are belied, even as regards slow march. The toe and heel are never brought into a parallel with the ground, and so set down. The heel comes first on the ground, and the toe follows. I do not say that some men cannot do it when marching in slow pace, particularly an officer steadied by carrying a heavy standard in front of him, but I say that it is not done by troops, even in slow time, and is not and cannot be done in quick time. And an appeal to the report of the camera is unanswerable. I have in my hand a snap-shot of the Guards marching past in slow time at Dublin Castle. It is conclusive. The truth is, that the goose-step is the complement of slow march, and if it is at all defensible in association with it, it has no ground of existence apart from it. Slow step is now no longer a factor in practical drill. This has been seen in Germany, and the balance-step has been cut out of their Drill Book. But tradition lingers. As Köppel, the German author, wrote more than fifteen years ago: "Slow march and its barbarous cousin the balance-step are unknown to the *Règlement*. In spite of this, the slow march still lords it almost unopposed over the whole of the infantry." Discipline is set at defiance to keep up the obsolete and useless.

Thus they have officially abolished the practice of the goose-step, because they abolished slow march, to which alone it could be applicable, yet, in breach of orders, slow march is practised, and we, having abolished all practical use of the slow march, still keep the goose-step, ordering that no pains are to be spared in teaching it. However, this last rag of the obsolete will probably not survive a new edition. For as we have seen, it is amazing how those who wring their hands in despair at any suggestion of adapting system to conditions, recover their equanimity when it is accomplished. They say, like Chatham, "never, never, never," and when they have said it in vain, they complacently bless, where before they cursed. We shall awake some morning and find the time-devouring goose-step has gone to the scrap-heap of obsolete machinery, and there will be no mourners.

That such things as have been referred to still present themselves in our training school shows how little philosophical consideration has been brought to bear upon our system of instruction, and they have been dwelt upon in the hope that it will be realised that just in proportion as development to suit changed conditions has in the past been slow and carried on in a piece-meal fashion, often to our great loss, so does it become clear that we have reached a time when the whole of our system as expressed in the Infantry Drill Book must be scanned paragraph by paragraph, and not merely worked on at one or two desks in Pall Mall in the way of an overhaul, but shall be so amended and adapted that the externals of drill shall have their proper relation to training for the field, instead of being as they so often are now, remnants of what once were actions and formations relating to war, but which are now a mere means of wasting valuable time, and which it is only misleading officers and men to present to them as a part of war training. And in lieu of the obsolete and useless, which we shall thus get rid of, there must be incorporated those things which modern conditions have created a necessity for, and modern science and invention have presented us with. We have suffered much from the failure to act thus in the past. If we do not take the lesson now, at this great opportunity, if now that our system has been thrown into the fiery crucible of war we neglect to take away all the dross and supply its place with new and sound material, we shall act criminally, and a coming generation may have our sin visited upon it in some day of trial. We have now a golden opportunity, at the beginning of a new century, when the nation is roused to the necessity of improving our military machinery, and is willing to make the sacrifices needful to attain the great end in view. May it not be lost or frittered away in once more turning over our old garments and patching in with new cloth here and there, to the certain making of the rents worse.

All these things have been dwelt upon because experience has taught that to rouse the average military mind to the necessity of considering change is not easy, and that, without this, suggested adaptations to meet new requirements will fall upon listless ears. In the earnest hope and belief that now in this year 1901 a real and drastic overhauling is about to begin, I propose to draw an outline of the developments which appear to be desirable in our system of training, organising, equipping, and clothing our infantry force.

First in order, the Instruction Book must be cleared of a great deal of the clogging element of obsolete forms, the drill still more simplified; and the work of the barrack-yard once more brought into direct relation in all its parts to the possibilities and requirements of the field. What is not relative to war must disappear from the regulations for ordinary training. To this end, the first thing to be done is to make the barrack-square drill have less association with mere moving about, and more association with fire exercises, and to put these two things in distinct and unceasing relation. The soldier, from the first day of his enlistment, onwards through all his training, must have the rifle and its disciplined and intelligent use as a fire-weapon made the very essence of his life as

a soldier. He should be taught something about his rifle on the very first day of his joining. It must no longer be the case that he shall be a soldier for weeks without having any association with the fire-weapon, and after he has got it he shall constantly find at drill after drill that the fire-weapon is made a mere burden to be carried about, which he must shoulder and slope and order, there being no association of its use for fire with his advancing and retiring, his halting and fronting. Something of development in accurate and disciplined use of fire must be learned or practised at every drill. At every drill the rank and file must be exercised in training for fire, and the leaders of the smaller units be exercised in the directing of fire, and those under them accustomed to receive and to assimilate such direction. Commanding officers should inculcate into all their subordinate commanders the conviction that every hour spent at drill in which the rifle has not been kept before the mind of the soldier as that for the intelligent use of which he is a soldier at all, and his capacity to use it effectively stimulated by exercise, is an hour more or less wasted. Great importance attaches to this, both morally and practically. The idea that musketry and drill training are two separate things, and that the former is not part of the daily business of the soldier is harmful, and has in the past done much evil. The officer has not been sufficiently impressed with the idea that fire-work is the essence of the foot-soldier's business, and that except towards an efficient bringing of fire to bear, all the marching by the right and by the left, and front forming, deploying, etc., are not practical factors in a soldier's business. Thus the commander, whether of large unit or small unit, and the men composing the unit have not been brought into real and constant association and routined in fire exercise together. Routine has been constant and wearying in matters not constituting modern field business, and the tendency has been to dissociate drill from field aptitude and fire exercise, instead of bringing movement and fire-exercises into the closest and most constant daily association.

The next thing that is necessary in the preliminary training is that the drill by shouted word of command shall be used only occasionally, and at the commencement of the drill hour, and that there be constant training in intelligent movement in response to observed signal. In these days of long-range accurate fire-arms, the stealthy mode of the hunter is more appropriate than the war shout of the close combat, and the shrill note of the bugle. When rifles are deadly at a long distance all shouting or bugling is dangerous. Surely, the present war has made this plain by sad experience. In an open country the presence of troops may be disclosed to the enemy over miles of distance by an ordinary barrack-square yell, or the toot of a bugle. Last summer, in camp, I heard on one occasion, when sitting in my tent, the word of command of a captain, who was out manœuvring against another at a distance of three-quarters of a mile beyond a thick wood. When he got excited the practice of the drill-ground returned upon him, and, although the instructions were to work by signal, he shouted, and revealed his presence to his opponent. It was an instance of the certainty that what is done at drill will be done in the field.

I fear we must believe from all we hear, that the shouted word of command has caused terrible losses unnecessarily in the present war, nay worse, that sometimes the misleading shout or bugle call used by a cunning enemy has spelled disaster. The new conditions of war call for leading, in which on a quiet note from the whistle, every eye in the unit shall be on the leader, trained to understand his signal, and to intelligently respond to his leading in absolute silence, no word or signal coming from elsewhere taking any effect, each sub-commander down to the lowest group leader keeping his sub-unit in hand, so that what is desired may be executed promptly and efficiently. It is astonishing how in a day or two troops can be got to respond with intelligence, and can be manœuvred without a sound being heard. And it has this great moral value that everyone can feel that he is practising something real, applicable to actual service work, which no intelligent man can do if he is marched about for days and weeks in close formations with perpetual forming to artificial fronts, and constant halting and dressing into straight lines by this flank and by that flank, in response to loudly-yelled commands, accompanied with unceasing injunctions to look straight to his front, in weary monotonous repetition of what never will be done, or indeed can be done within 2,000 yards of an enemy under modern conditions.

Such work by communication of signal will be quite as effective in inculcating and keeping up the spirit of instant obedience as all the shouting of the present barrack-yard. And in relation to movement by visible signal, I would ask, Are we never to get rid of the arbitrary, artificial, and useless drill-ground "Front," which hampers free movement, and complicates what should be simple? Some years ago I pointed out that in our Infantry Drill-Book in the definition clause three separate and contradictory definitions were given of the word "Front," I got half a loaf in the substitution of the correct word to express the extent of ground covered laterally by troops, viz., "Frontage." I still ask for the other half of the loaf—the abolition of the second alternative definition of the expression "Front," which is said to be "The direction in which soldiers face when occupying the same relative position as when last told off." This is a very faulty definition, and is made worse by the foot-note: "This definition is retained for purposes of drill, but it must be remembered that even at drill 'Front' means the direction of the enemy." Surely this is nonsense. Suppose a corps is standing to its front in the sense of this definition, then an order to change its front would be an order to turn away from the enemy, unless the enemy was obliging enough to conform. If a column, which is fronted to the east, is supposed to have its front to the enemy, then if it forms into line, the line will not front the enemy. Such a definition is hopelessly bad, and shows the absurdity of having an artificial front fastened on to a body of troops, necessitating two inconsistent definitions of the same expression. And it is also misstated, for if ranks have been changed, then the front under subsection (b) is not an arrangement of the men in the same position as when last told off. What a blessing it would be if troops could be handled always by naming or indicating what was to be done by ordinary language

or signal, using "right," "left," or "about," or "right up" and "left up," instead of speaking of a front which is fictitious, and obscuring the true meaning of "front," viz., the direction towards which action, as distinguished from mere movement outside the range of action is to be taken. In movement by signal there can be no artificial front. And as movement must be by signal, the artificial front must go.

The next point I would emphasise is the importance of developing control as distinguished from command, by the formation of groups under group leaders, and making this an integral part of the organisation. What is wanted is the handful of men that the group leader can control personally under his superior by individual observation. This mode of working should be constantly practised. It has been acknowledged on all hands that this is desirable and ought to be done, but it is not done; it still requires development, and should be made a distinct feature in the next Infantry Drill-Book. Dispersing of a unit into groups; rallying into groups after complete dispersion; and reforming the groups and then reforming the unit, should be a regular exercise. It would be found highly disciplinary, and the practice given to group leaders would make them most valuable on service, and aid the commanding officer in selecting the best men for non-commissioned rank. There is no way in which the all-important elements of tactical cohesion and of fire-control can be more efficiently developed than by the use of a system of grouping. But it must be a constant use during the training, and made matter of daily practice.

It is not necessary to say much upon the next head, which is Physical Training. Great attention has been given to this of late years, and with the best possible results. The present system has been most scientifically devised to develop the body and its different organs in the best possible way, and the teaching is kept in such a disciplinary style that as regards the inculcation of smart and prompt obedience it may well take the place of much of the present flesh-wearying repetitions of the drill ground. The recruit will get all that he requires of training in prompt obedience in an interesting and unmonotonous manner, while at the same time his physique is being healthily developed. The present war has shown that the troops sent out were in good hard condition, in contrast to what was the case in another part of Africa at an earlier date, in the case of corps in which the adjutant and sergeant-major were the *dui majors* of the instruction.

The next matter which is of great and ever-increasing importance is mobility, which involves in its consideration questions of equipment and transport, and also what I shall call artificial mobility. The present war has made it plain that the British soldier can still do wonders in getting over the ground on foot. The continuous marching that has been done on many occasions has equalled if not surpassed the feats of Crauford's Light troops. But it has also become manifest that no infantry marching, however magnificent as a feat of pluck and endurance, can give the results it did in former days, if your opponent has higher mobility from being so organised that his infantry is carried from place to place at a

speed greater than that of foot-march. If this was seen in the earlier stages of the war, it is being seen still more forcibly now. For while we have a very large army of infantry in South Africa, we cannot dispose of the remnants of the Boer force, without, as we are now doing, organising and assembling for the final operations a strong force of infantry having a higher mobility than ordinary foot-soldiers.

Now, we have four means of increasing mobility, and let us be thankful that as the primary object of all military organisation is home defence, that in this country all of them are available, and the country itself affords the best means of making advantageous use of them. The four are : railways, motor vehicles, bicycles, and horses. Perhaps some may wonder that I put horses last. But I do so advisedly, for of all the four the horse is for home defence infantry purposes the most expensive, the most difficult to provide for, the most perishable, and the slowest. That we shall always require a large contingent of infantry mounted on horses is certain. For there are many occasions to which mechanical mobility is not satisfactorily applicable. Nevertheless, we shall commit a grievous error if we confine our efforts in the direction of increased mobility for the infantry to the organisation of a horse-carried force only.

It is not necessary to say much about railways. All I shall say is that for home defence we are probably better provided in that respect than any of the Continental great Powers. Our facilities for transferring troops from point to point, up and down, or across the country, are excellent and ample.

But in the near future a new development of mobility by carriage is certain to take a high place, and in a country so well intersected by good roads as our own, to prove itself to be of very great tactical value. I mean road power traction. Time does not permit that I should enlarge upon this tempting subject. It is only possible to give an outline of what may be expected. Motor vehicles, travelling at the rate of 20 or more miles an hour, will give great facilities for seizing advanced points, holding them while troops are coming up in support, holding on to cover withdrawals, and transferring troops from one part of the front to another or to a flank. The vision is of steel-plated motor wagons with machine guns mounted on them, working in aid of the infantry by conveying groups of them rapidly from point to point, forward, back, or to a flank, acting as the guard of bicycles when cyclists are engaged off the road, covering their withdrawal when necessary, or bringing forward their bicycles when they advance, obviating the present difficulty which handicaps the cyclist, viz., that his vehicle has to be left at a fixed spot, to which he must return. The development of the road tractor for war service, both combatant and transport, is one of the most important matters for immediate consideration, going far beyond my present subject. That for the infantry branch of the Service its importance is very great indeed will, I hope, be realised. In the motor carriage we have means of locomotion in which high speed is attainable and can be kept up, the fuel for the driving being small in bulk and light in weight, while the motive power is not limited by any considerations of fatigue or feeding and

watering divergencies and stoppages. It may also, looking to the speed with which a power carriage can go back and forward, be the means of, in great measure, overcoming the difficulty of infantry ammunition supply, which is daily becoming a more important factor in the combat. Motor traction, as applied to war, would furnish material for a full lecture by itself. Its importance cannot be over-estimated.

The development of a large cycling force is one of the most important matters connected with our Home Defence. I presume that no one doubts this, and it is unnecessary to enlarge upon it. In no other country can a cycling force be more useful in view of the intersection of its whole surface by roads. The combination of cycle and motor carriage will, as has been pointed out, be of very great value. General Maurice has successfully experimented in this direction, and his report is most encouraging.

As regards the mounted infantry, I would suggest that a certain number of horses should be made part of the establishment of every infantry regiment, and that during the year at least one-half of the strength should receive six weeks or two months training in riding and mounted infantry exercises, two men being attached to each horse, and in the exercises one-half of the men alternately doing foot duty. What is wanted is, that a large number of the infantry should be able to ride, manage, and take proper care of horses, and in this country, where there is so high a sporting instinct, I feel sure the soldier will cheerfully, for a month or two, take care of a horse, in preference to constantly spending hours messing with pipe-clay and polishing up a very unnecessary number of buttons, or going through the deadly monotony of guards, parades, and "fatigues."

Lastly, let me say a word or two about dress. The subject is a large one, and more important than most people think. The question what can be got out of the soldier, without his being lost to the Service, temporarily or permanently, depends more on what he has to carry, and how he has to carry it, than upon many considerations which authority has hitherto deemed all-important. The subject demands a full and unprejudiced inquiry. What I have to say is in the light of a question I read in an able military work: "Why should the soldier be the only working-man in the Empire whose dress is entirely unsuited to the work which he is called upon to perform?" I shall touch on two points only. The first is, that the soldier should be able to free his arms from covering, whenever the weather makes this a natural thing to do. I repeat a suggestion which I made some years ago, and which has not yet passed the being-jeered-at stage. It is, that the soldier's jacket should be made with slightly projecting wings, and that the sleeves should be inserted and buttoned below these wings, so as to be easily removable, and that they can be carried separate. The uncovering of the arm in warm weather is one of the greatest reliefs possible to a man who has to exert himself. It is done by the working-man all over the world. And nothing will refresh a tired man so much as being able when water is found to apply it from his elbows to the tips of his fingers. Thus the soldier, who has to work hard

and carry a good deal of weight, would get a very important refreshment and aid to resist fatigue, which his present sleeve unnecessarily increases. He has a right to relief, seeing that he cannot in war have an eight hours' day, and may have to wait long for rest and food. I am led to believe from what I see in the illustrated papers that at the war a good deal of work is done with bare arms, and I would fain make it possible for the infantry soldier, when wearing his jacket, to free his arms.

The other point is the head-dress. There again experience has always been set at naught, the course taken being the most stupid and reprehensible that can possibly be. It comes down to us from the time when hard hats reigned supreme, when gentlemen went out to shoot and cricketers batted and bowled in tall hats built on iron frames. We have at one time pulled the hat in at the top, and made it like a French shako; at another, and, I suppose, because the Germans beat the French, we have rounded it off at the top, and put a ridiculous spike in it, making it into a bad imitation of a bad hat, the Pickel-Haube. But, through all these changes, the part that touches the man's head remains the same—a hard, metal-mounted, non-porous glazed pipe, that can only rest on the head in one position, is comfortless when on, troublesome when off, oppressive in summer, cold in winter, gives no relief from perspiration, and forces it all down the face—the worst device possible for a shooting soldier—a miserable testimony to human perversity, expensive, pretentious, and inconvenient up to the limit of human invention.

Seven years ago, I said publicly that “the soldier should have a head-dress such as all sensible men, who have liberty to wear what they please when they are taking strong and trying exercise, with exposure to sun, adopt of their own choice. The white man, all over the world, wears a soft hat with plenty of brim. Whether it be a felt wide-awake, or a tweed deer-stalker, or a broad Kilmarnock bonnet, or a plaited seaman's summer hat, a flexible head-dress, well brimmed, is the choice of all men who have to endure physical hardship. Therefore I hold it to be sound logic that, in a time when the fullest strain of the soldier's powers may be called for, and it is essential to relieve him from all unnecessary pressures which will diminish his powers of mind and body, we ought not to be ashamed to take a hint from the ploughman, the sportsman, or the backwoodsman.”

I was jeered at, and I tried to wait as I ought to wait, and am thankful I have not waited in vain. It is certain now that the hard hat of all shapes is doomed, and will disappear from the drill ground as it disappeared half a century ago from the cricket field and the golf links, the cover and the river. And when we get a sensible hat, we may also hope to get rid of the Lilliputian pork-pies, and small slices of orange, called forage or fatigue caps, which some call smart, but which any sensible person would call ridiculous.

There is no time to speak of equipment, which certainly must be modified, and especially in the mode of carrying ammunition, and in the cutting down of load to a minimum.

Allow me, in closing, to express the earnest hope that no time will be lost, and that before the lassitude of relief of tension falls on us at the close of this war, full and practical examination will be made, and sound decisions reached in regard to the all-important development of the infantry for whatever it may have to encounter in a new century. This struggle in which we have been engaged is invaluable to us in two respects. It has given us practical experience of war under the latest conditions which no other European nation has had the opportunity of acquiring, if we exclude poor broken-down Greece; and it has done for us what is perhaps even a greater thing, indeed, as I think, of incalculable value. It has supplied us for the future with a boundless field for the practice of manœuvre and field firing exercises, in the very centre of our vast Empire, so that we can give training in a real sense to large bodies of troops, without injury to land, and with the effect of bringing much money to a rural population. The necessity for many years of having a large force in South Africa, instead of being as some think a loss to this country, will be very great gain. We shall always be able to train troops within easy reach of home and of India, and in a good climate, as we now cannot train them except in the trying climate and at the great distance of India. Can this addition to our military advantages be over-estimated? I do not think it can. But one thing is necessary if the full benefit is to be reached. We must re-organise our whole system of training to what Guibert describes as *relatif à la guerre*. We must cast out of our system what is inapplicable to the conditions which exist, and discipline our troops by what is useful and practical, remembering—I use Colonel Maude's words—"That discipline is the product of intelligent drill—not the same thing as the mutual hypnotisation which used to take place in our barrack-squares."

Colonel J. A. FERGUSON, *p.s.c.* (late Rifle Brigade):—Those who are acquainted with the service and the writings of the right hon. lecturer expected to hear an entertaining and suggestive lecture, and have not been disappointed. More than twenty years ago "*Macdonald on Tactics*" was a text-book at the Staff College. When I had the honour of being associated with the Volunteers in Australia we adopted his method for our extended order drill. It never failed us in any ground; it could be learned in half-an-hour by the dullest recruits—and recruits out there were seldom dull—and when I came back in 1883 I tried to get the authorities at home to accept it for our home Army. It was tried at Aldershot and it was approved by every commanding officer, and I have never yet ascertained why it was not accepted. Colonel Macdonald has done the Army good service for many years, and I am very glad to have this opportunity of acknowledging the great help his valuable book was to the Volunteers of Australia. I am unable to follow the right hon. gentleman, however, in some of his remarks to-day, and I have noted a few points on which, if I do not exhaust the patience of the audience, I should like to comment. In the first place, I think the lecturer has rather set up a man of straw in order to knock him down. As regards the principal conditions of modern combat in relation to the infantry, those thirteen principles have been accepted by the Army for a considerable number of years; certainly they have been taught for many years past at Sandhurst. But no doubt—and I hope we shall hear the opinion of some officers who have been at the seat of war—the present campaign will modify our ideas very much as to the distance at which men are safe in the presence of the enemy. We have been in the habit of teaching that men should get into extended order at least half a mile from the enemy. We shall have to double that, as the

lecturer states to-day. Troops cannot approach the enemy, except in extended order, within a mile. But, is there not a risk, in adopting changes hastily after the present campaign, that we shall be misled by the very exceptional character of the enemy whom we oppose? We shall never again, probably, be opposed by an enemy the whole of whose Army consists of mounted infantry. I am quite sure the authorities in making changes, which they will assuredly make, will not be carried away too much by the experience of this very unprecedented campaign. No doubt the supply of ammunition in the field is a most difficult question, one not solved yet. Perhaps the lecturer's idea of bringing these very modern machines into use, the motor cars, to help the question of ammunition supply might be a sound one. I cannot help saying that I think the lecturer's experience at Aldershot of a regiment which formed up on the highest possible ground was an unfortunate one. It must have been a very badly drilled regiment. More than thirty years ago, my own commanding officer, now Sir Julius Glyn, taught us how to utilise cover, and woe betide the man or company commander who halted a few yards in front of cover or a few yards in rear. I cannot think that the unfortunate specimen which the lecturer has brought to our notice to-day is at all an example of the drill of the Army. All regiments must have been taught for many years past how to utilise cover. I entirely agree with the lecturer about the value of loose formation in drill; that is not a very new idea. Many years ago my own battalion in India was habitually drilled, especially in the hot weather, without markers, and the men used to keep their dressing quite as well at half interval as shoulder to shoulder. I suppose I am very old-fashioned, but I am not quite sure that I should be glad to see the goose-step go even now. The lecturer is accustomed to very exceptional recruits. He has to do with magnificent material in Edinburgh, but happily we still get a good many country-bred lads, and the ordinary yokel when he joins is hardly a man into whose hands you can at once put the rifle. I am sure we shall be all glad to see the period shortened if possible, but we must have a period of setting-up drill, and I am not quite convinced that the goose-step is the worst form of setting-up drill. Physical training of course is good, but it is questionable whether physical training will teach a man who is accustomed to shamle behind the plough how to lift his feet. Then as regards shouting the word of command: I thought shouting the word of command had been a long time obsolete. In my own regiment for many years the commanding officers always said to us: "Now, I do not want to hear a single word of command; whistle and signal"; I thought that was the custom in the Army. There may be eccentric officers still left who will get markers out within 500 yards of the enemy, but that is not the rule of the Service or what the authorities want us to do. As regards the ever-increasing importance of mobility, that is certainly one of the lessons we have learned in the war. But perhaps we shall never be again opposed to such a mobile enemy. With regard to motor vehicles, they are in their infancy; we have hardly got accustomed to the smell of them yet! Is it not a little premature to remodel our tactics to suit a vehicle which is still under suspicion, and which is hardly an accepted means of locomotion yet? However, I am not dissenting from the main conclusions of the right hon. gentleman, though I offer these small criticisms. I am entirely at one with the lecturer in essentials, and I think it is a most valuable thing that attention has been drawn to the necessity of having more mounted infantry, and real mounted infantry: not taking your picked men from the infantry battalions and half training them as mounted infantry, but having a large number in our Service of real mounted infantry. Somebody wrote to the papers the other day and said rifle regiments ought to be turned into mounted riflemen. As a rifleman I should be very sorry to see the *chasseurs-à-pied* abolished, but we must have a large body of mounted infantry. We must have five or ten times the number of trained soldiers we have got. That is the real danger and difficulty of the country, that we have not got the men. Give us the men and we will train them fast enough. I should like to see the whole country, every able-bodied man between the ages of eighteen and thirty, every man, put through the Militia. I think the real lessons of the war are: more training in scouting, more practice in entrenching, and that every infantry soldier

should carry an eatable ration in his haversack, and no man should ever go into action with only the iron ration that he cannot eat until he gets hot water.

Colonel E. T. H. HUTTON, C.B., A.D.C. :—I should like to convey my very warm congratulations to the distinguished lecturer for his extremely able paper and for the very advanced views which he has put forward. I daresay he will recall the fact that nearly twenty years ago he co-operated with me in pressing forward several of the points on which he has laid so much stress in the paper which he has read. I think it is only fair to remark that a very large number of important changes which he proposes have either in part or in whole been adopted. Certainly, the principles which he advocates are universally accepted by all soldiers at the present day who are in active employment. I think that the lecturer has perhaps laid less stress than he might have done on that principle of military organisation which is so vital to success on the field of battle. I am sure that the omission is an oversight, because it is a question which he and I have discussed very often in former days, viz., that the real secret of the steadiness of men in action and of the disciplined handling of men under trying conditions is that the administrative formation unit and the tactical unit should be identical. He lays great stress very properly upon the advantages of a group system. I should like to be allowed to emphasise his remarks in the strongest possible manner, and I say emphatically, that the whole secret of success of leading troops in war under the conditions which now prevail depends on the decentralisation of authority to the group leader and to the individuality group itself. This principle more especially holds good with mounted troops, with whom I have had perhaps more experience during the last twenty-five years than falls to the lot of many. The all-important fact which the right hon. gentleman has not dealt with as strongly as I think he might have done is that this group system must be accepted as the administrative as well as the tactical unit of organisation; that is to say, that the sub-unit or group in barracks, in camp, or in bivouac, must correspond with the sub-unit or group on the drill ground, and on the field of battle. The right hon. gentleman has laid great stress on the importance of a development of loose formations. The tactical success of the British Army in the future depends on our developing this system of loose formation, and on our being able to manœuvre and work our troops, whether in large or in small numbers, with the greatest possible facility, in extremely extended formation. The sooner this fact is realised and accepted the better. The right hon. gentleman finds fault with our soldiers of the present day for not having made further developments and greater changes. With all deference to the lecturer, I venture to think that no European Army has made such developments and changes in tactics of infantry and of mounted troops as our Army in South Africa has done in the last fifteen months. I can only say that in 1897 I attended the German manœuvres and the French manœuvres and there I saw the very tactics, which the lecturer scorns, were still upheld and practised by all the leading military authorities and influential soldiers throughout Europe. It is not much to be wondered at, therefore, if the British Army has not yet adopted all the very advanced theories which the lecturer has propounded. I will say this, however, that there is a very large school of British officers who accept not only all that he says, but even more, because during this late campaign our practical experience has shown us absolutely as a certain fact, that the close formations of the early part of the nineteenth century are perfectly inapplicable to the tactical formations required for the field of battle of the present day. The sooner we adapt our Drill Book to the innovations which are necessary to success on the field of battle in the future, the better for the British Army and the British Empire. The lecturer has referred to the adaptability of the British soldier and his strong individuality. It has fallen to my lot to have considerable experience of the organisation and training of our colonial armies, as well as our armies at home, and I think that you cannot touch, except with a very careful hand, anything that affects the discipline of the soldier in the field of battle. The last speaker has alluded to the goose-step. I am not in favour of the goose-step, and I am in favour of the abolition of a large portion of the existing Drill Book; but I hold most strongly that if you are going to have the British soldiers of the past emulate the deeds of their fathers, you must maintain a

stern and relentless discipline on the field of battle. This all-important condition is only to be achieved by a great attention in the initial stages of the training of the soldier, by emphasising in the strongest possible manner the steadiness of the man when he stands at attention, and his absolute silence under all and every circumstance. I should be prepared to sacrifice much to insure these points.—But, with our colonial armies, especially where you have a very high degree of intelligence, and with our Volunteer Services which are similarly recruited, you have no difficulty, really, in maintaining a very high standard of discipline indeed if you adhere to principles intelligently explained. The two principles which are all-important for success in battle are, firstly, a stern strict discipline—an effacement of the individual when acting in mass, and secondly, a high degree of individuality and self-reliance on the part of each soldier when acting by himself. As regards the first, the instinct of discipline which must be ever present to a soldier can only be gained on the drill ground, and should be imparted at the beginning of his military career. Therefore, if the lecturer will forgive me for saying so, I must beg of him to be very careful indeed how he touches, even indirectly, this important factor, viz., the steadiness of the men when acting in mass and the self-effacement of the individual at the critical moment on the field of battle. As regards the second, viz., the development of the individuality of the soldier—an all-important factor also on the field of battle—we have to recognise that extended formations necessitate the strongest individuality and the highest degree of self-reliance which we can obtain, subordinated also to the ever-present instinct of discipline to which I have alluded. We require, therefore, a system of drill and training which shall be based on these two principles. The author has alluded to the elimination of a large portion of the Drill Book, and has commented upon many of the obsolete forms, and especially upon the handling of arms. All practical soldiers agree, I think, that we could perfectly well simplify the manual exercise, and that the Drill Book might with advantage be reduced in bulk. The simplification and the curtailment of our military manuals affect not only the well-being of the Regular Army, but the efficiency of the Armies of Greater Britain. It is a point upon which I think perhaps those who undertake reforms here in London lay hardly sufficient stress, that the slightest change made here at home reverberates through the whole of the Empire, and extreme difficulty at once arises in dealing with it. The lecturer has alluded to mounted infantry. No doubt he will recall the fact that seventeen years ago he was one of the strongest advocates in pressing forward this question also. In spite of the strong advocacy of Lord Wolseley, the adoption of a system of mounted infantry was only accepted by the Army after many years of argument and discussion in this Institution and elsewhere. The importance of a detachment of mounted infantry forming a portion of each infantry battalion, cannot be over-estimated. I feel perfectly certain that my recommendations of 1886 and the following years will ere long be adopted, and that as the result of this campaign we shall find that each infantry battalion will be provided with a small body of mounted infantry. Each infantry regiment will thus utilise its mounted men for all its scouting and reconnaissance. These duties must inevitably be carried out by mounted men under the new conditions of war on account of the great distances that have to be covered, and the difficulties of ascertaining the whereabouts of the enemy consequent on the general adoption of smokeless powder. Those principles of mounted infantry, which I had the honour to advocate in 1886 in this Institution, when the lecturer was present and lent his powerful aid, are now pretty generally acknowledged to be an absolute necessity to the warfare of the present day. Will the right hon. gentleman allow me to take exception to one remark towards the end of his paper? He alludes to the changes he advocates as being the primary object of home defence. I cannot for one moment suppose that he means to limit our defence to the defence of our own shores. The defence of England, as England is, can only be achieved by the defence of the British Empire, and by the active protection of British interests. The distinguished lecturer will, I am sure, agree that all changes in the British Army must be such as will admit of its undertaking offensive-defensive operations in any part of the world where the fate of the integrity of the Empire may be imperilled, and not by any means confined to home defence.

Colonel the Right Hon. Sir J. H. A. MACDONALD, K.C.B., in reply, said:—I feel complimented in having the lecture criticised by two such excellent officers and friends as the gentlemen who have spoken; I am very well aware that in a lecture of this kind one must be always appearing to advocate too strongly the points one is stating. It is absolutely necessary to emphasise these points, and I fear in doing that one is supposed to be setting aside other things which are also of relative importance. Colonel Fergusson said I had set up a man of straw to knock him down. I entirely agree with him that the principles on which he and I are at one are accepted by men who know and are willing to carry them out. But there are a large number of people in our Army who, if anything is stated as an accepted principle by those in authority, are not able for a very long time to assimilate it, and that is a process which I wish to stimulate as much as possible with the aid of this Institution. The case which I quoted of the gentleman at Aldershot, who deployed his battalion with markers out on a bank, was an illustration not so much of the fault of the battalion commanding officer, as of the fault of those who had charge of the inspections. Such a thing could never have happened if our system of inspection had been wiser, because a proper system of inspection would have disclosed the folly of what was being done, and the commanding officer would have been rebuked for it, and it would not have happened again. That is one reason why I said I certainly would not mention the regiment if I had known it, because I attribute what I saw to the fault of the system. The speakers will agree with me that, till within the last twenty years, the system was such that men were called upon to prepare themselves, colonel, major, captain, adjutant, down to the lowest drummer-boy, in a way that had no relation whatever to modern war. That ought to be changed, and to a certain extent is being changed. What we want, I think, is authoritative forbidding of the natural tendency to do what we have always done. That tendency is very strong with soldiers, very strong with adjutants and sergeant-majors, because the moment you attempt to do anything more they think it unsteady the men. There are false and exaggerated views about what steadiness means. "Steadiness" means really the spirit of obedience so inculcated into a man that he obeys just from nature and no longer does what is contrary to discipline, because it has become a second nature to him to obey. It does not matter to him what it is you train him to obedience in. Obedience can be as well inculcated by whistle and signal as by yells, the one being a mode applicable to modern war conditions, and the other not. I think it is common-sense that if you can train a man to obedience in what is useful, it is better than training him in what is not useful when actual war work is to be done. General Hutton gave a very good instance of a man springing up to attention, as a demonstration of good discipline. The Germans carry that out. If a German soldier is suddenly ordered to pump some water into a pail, the first thing he does is to come to "attention," and then he goes to pump the water into the pail. But that is no reason why men should be kept practising at mere externals having no relation to actual soldiering, day after day and week after week, wasting time and wearying and destroying the interest of the soldier in his work. I hope it will be noticed that I said that the first part of the drill ought certainly to be done in a strict, disciplinary manner; but what requires to be realised is, that this can be, and ought to be, done without perpetual shouting of words of command, which one can hear half-a-mile off, and forcing men into stiff and unnatural attitudes, and obsolete formations. It is a continuation of that, the perpetual wearying round of a barrack-yard, which, I think, wise men are learning to condemn as overdone, and consequently injurious instead of beneficial. I hope it will be believed that I do not disagree with anything said by my two critics. Colonel Fergusson said something about the bellowing out on the field having been abolished in the Rifle Brigade. That is just what I should expect. We know well that the Rifle Brigade has been always ahead of the rest of the infantry. What I want is the rest of the Army to follow. General Hutton said I had not emphasised enough the question of the group being an administrative unit. I emphasised that pretty forcibly the last time I was here. I had not room to put in everything this time, and I was emphasising the necessity of having groups established as a necessary thing in our Service. When they are established they

will become administrative groups. On one occasion I went to the War Office to see a very distinguished officer and spoke to him about the great importance of working together, and what a great thing it would be if the men could be grouped so as to do all their duties together. He said: "That would be a very good thing, but it would not work, because our system of squadding in barracks would not admit of it. When we have two men together in the British Army these two men are never on duty together. Our plan is that one man shall do the duty and the other clean up all the things in the barracks." If that is your system, then good-bye to all your system of attempting to make men work together as comrades. As soldiers they ought to be together day and night; wherever they are, the men that are grouped should be together. I say emphatically: If any system of squadding in barracks prevents that, the system is essentially bad for the training of our Army, and the sooner it is altered the better. I may also express my entire concurrence with General Hutton in his view about our organisation being not merely for home defence, but for offensive purposes. Our Army cannot be efficient or satisfactory unless it is able to do work elsewhere than in the United Kingdom. But I do say this, that it is the duty of every country in considering all its different arrangements for the purposes of war to see that, if there are two modes of doing a thing, both of which are equally good, but one is better adapted to the nature of its own country than the other, the one that is well adapted to the nature of its own country is adopted; and I am sure General Hutton will not differ from me in that. You have been very kind in receiving this lecture; and being of a practical turn of mind, I should like to say this in closing. Lectures have very little effect unless those who listen to them disseminate abroad what has been said. Whatever you are going to do, no matter whether you do it according to anything said in my paper, or by the two gentlemen who have spoken, or in any other lecture delivered here, the important point is that not merely should we have Pall Mall reform—I do not know what is wrong there, but everybody in the newspapers seems to think there is a great deal wrong. I beg of you, disseminate to the utmost of your power the urgency of leaving what is behind, and vigorously pressing forward to what is before. We want to have our whole military machine really taken out and thoroughly inspected, to see whether it requires alteration according to new conditions or requires to be furnished up, and what regulations need to be rejected and what new regulations introduced. I do sincerely trust, now that we have had our first big war for a good many years, we shall not allow the opportunity to pass without doing our utmost to see, when we approach another war, that we shall have the best military machine that can be produced for the purpose of doing what requires to be done when such a misfortune overtakes us. I am most grateful for the kind way in which what I had to say has been received.¹

¹I should like to add that in urging that the soldier should at once on joining be made acquainted with his weapon, I did not mean that he should at once be entrusted with it altogether. What I did mean was that from the moment he joins he should have the fact impressed on his mind that it is *for fire—effective fire*—that he is going to be trained, and to help to this that at the very outset he should be taught something about the weapon, made familiar with it, and imbued with the truth that it is he and his weapon together that constitute the soldier that can do useful work in the field.—J. H. A. M.