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Friday, February 10, 1888.

COLONEL C. B. BRACKENBURY, R.A. (Director, Artillery College, Woolwich), in the Chair.

THE PRACTICAL VALUE OF THE WAR GAME.

By Captain H. SPENSER WILKINSON, 20th Lancashire Rifle Volunteers.

THE "Prussian Military Gazette" of March 6, 1824, contained a paragraph which may be rendered in English somewhat as follows:—
"The attempt has often been made to represent in a manner at once instructive and amusing the operations of war. These attempts have been known by the name of War Game. There has always been a difficulty in practically working out this conception, and there has remained a very great difference between the seriousness of war and the frivolity of a game. It is worthy of remark that hitherto none but men who were not soldiers have occupied themselves with this discovery, and that therefore by their imperfect picture of war, and their still more imperfect imitation of it, they could never satisfy the requirements of thoroughly trained Officers. At length an Officer has devoted himself during a series of years, with attention, judgment, and perseverance, to the pursuit of this object, and has so far extended what had been begun by his father, Councillor von Reiszwitz, that war is now represented in a simple and life-like manner. Whoever understands in all its branches the conduct of war, can undertake without hesitation to take the part of commander of a larger or smaller body of troops in this game, even if he knows nothing of the game and has never seen it played. If it is worked out on good plans of real ground, often changed so as by a series of fresh dispositions to give more variety, the game becomes still more instructive.

"I shall gladly help with all the means at my disposal to increase the number of existing sheets.

"If First Lieutenant von Reiszwitz has found an agreeable reward for his exertions in the approval of the Princes of the Royal Family, of the Minister of War, and of the superior Officers who have become acquainted with his game, he will, when it becomes known and generally used, assuredly earn the thanks of the Army."

This flattering notice bore the signature of no less a personage than Von Mülling, at that time Chief of the General Staff, and it was soon afterwards followed by a Royal Order, instructing all regiments to provide themselves with the Kriegsspiel apparatus, at the expense of the Budget. The Kriegsspiel was thus introduced under the most favourable auspices into the Prussian Army, where it flourished with varying fortunes during the following forty years of peace. The systems

followed during this first period of the history of the game seem to all have been of the same mechanical type. The earlier text-books are rare, and I have never been able to see those of Reiszwitz, Decker, or Witzleben. But the traditions of Reiszwitz and of the school which he founded may be looked for in the Berlin "Kriegsspieler Verein," which published in 1846 a text-book with the same title as that of Reiszwitz, "Guide to the Representation of Military Manœuvres by means of the War Game Apparatus." Before the war of 1870 two other schools or societies, that of Upper Silesia and that of Magdeburg, had produced similar text-books. The Silesian school is represented by Tschischwitz's "Guide to the War Game," the Magdeburg Society by Trotha, who copies the traditional title.

All these books bear traces of the origin of the Kriegsspiel as a game, the characteristics being that a series of conventional rules are laid down, to be observed in all cases without exception. Thus in all these early systems we find the game carried on by "moves," and every case of collision is settled by the application of definite fixed rules. You calculate the numbers of each side, and thus get a preliminary fraction. Then you look under certain lists of conditions, and find tabulated opposite to those applicable to the particular case some similar fractions. These fractions compounded together result in a ratio by which so many faces of a die are assigned to one combatant, and so many to the other. The die is thrown, and according to the colour of the face that comes up one side receives the denomination Repulsed, Defeated, or Totally Defeated, which means that the pieces in question are turned upside down and considered more or less out of the game for two, four, or eight moves, as the case may be. Another table enables the curious, by the same throw of the die, to ascertain the losses inflicted on both sides by gun, rifle, or sabre. Thus in all these codes of rules the die occupied a very prominent place, while the losses caused by infantry fire, though various plans of roughly ascertaining and noting them are explained, have no practical effect upon the conduct of the operations, except in so far as they diminish in subsequent actions the number of troops engaged. This peculiarity was copied in the handbooks that first appeared in England, both of them dated 1872, and one of them being in substance the rules of Tschischwitz, the other those of Trotha.

After the Franco-German war the Kriegsspiel began to be taken up in Germany with fresh interest. Its position in 1874 is fully explained in a correspondence that appeared in that year in the "Allgemeine Militär-Zeitung," a professional paper published at Darmstadt. Five Swiss Field Officers wrote to the Editor, asking about the War Game in Germany, a series of questions to which answers, written by a German Officer, a pupil of Scherff's, were published.

It seems, according to the evidence thus forthcoming, that after the war of 1866 the War Game had fallen somewhat into disrepute. The rules of Trotha and Tschischwitz were felt to be too unlike the realities that had been seen on the Bohemian battle-fields. Those who continued to cultivate the Kriegsspiel abandoned the attempt to work out combats by its aid, treating it merely as a valuable exercise in

map reading and the composition of orders, or they ceased altogether to treat it as a game, dropped the rules, the dice, and the tables of losses, and considered it as a manoeuvre executed under the eye of an umpire, but with imaginary troops represented by the pieces, and with the map instead of the country. The extent of the change which this implies is greater than appears at first sight. In the old game there was really no umpire. The decisions were made by the rules, the tables, and the die, and the person who applied them (called in Berlin and Neisse the "Confidant," and in Magdeburg the "Impartial Referee") was necessary only to make it possible for each party to move without the other knowing all that he was doing. On the old system, the game, with its rules, and tables, and dice, any Officer who took the trouble to get up the rules could act as Confidant or Referee. But when the game and all its rules were gone, and instead there was a manoeuvre on the map, nothing could be done without an umpire. No Officer likes his command to be put out of action, unless by some one in whose judgment he has so much confidence as to believe that it would be ridiculous to dispute it. Accordingly it was found that Officers did not join in map manoeuvres unless the umpire was some recognized tactical authority. We are told, then, that when the Kriegsspiel began to flourish again after the Franco-German war, the rules of Tschischwitz and Trotha had entirely gone out of fashion, and the free system of umpiring had come in. The War Game had given way to the map manoeuvre, and the free system was practised by all the famous umpires of that time,—Verdy du Vernois and his pupil Meckel, Scherff, and Bronsart von Schellendorf. But where there was no famous umpire the whole practice began to drop out of fashion. The attempt was then tried to devise a method which should make the game practicable even when there was no umpire of established repute to be had.

The beginning of this new departure, the first attempt to expound a system which while abandoning the old rules should yet be an instrument fit for the use of the ordinary Officer, was made in a pamphlet called "Studies on the War Game," published in 1873. The author of the Studies was a Professor at the Hanover Kriegsschule, Lieutenant Meckel, who published a few years later when a Major on the General Staff a very important treatise on Tactics. The Studies consist substantially of two essays, of which the first, on the advantages to be derived from the practice of the War Game, the second a criticism of the old rules as represented by Trotha and Tschischwitz. Meckel's view was that inasmuch as the decisive element in modern battles is the effect produced by firearms, that effect ought in all cases in the War Game to be the basis of the umpire's decision. He showed that the old rules, though they gave tables for calculating losses caused by fire, practically decided all engagements without reference to the effects of firearms, except in so far as the number of men shot diminished the number of combatants. He proposed to calculate carefully the losses produced by fire, and to ascertain by this means the physical and moral condition of each body of troops engaged. Upon the basis of this moral and physical

condition of each side the result of a collision was to be decided. "If," wrote Meckel, "the War Game is to give a natural and instructive reproduction of modern fighting, the great power of the effects of firearms must be assigned the same leading part upon the map which it plays upon the battle-field. The chances of battle depend nowadays mainly upon fire effects. In the combat of infantry against infantry it is impossible to determine the chances of the opposing sides unless the effects of their fire are accurately determined. In the decision of every infantry action the first question must be: Upon which side is the superiority of fire? What firing force can the defender develop against the attack? . . . The only combat that does not depend upon the results of firing is that of cavalry against cavalry. Accordingly we must require from the War Game first of all that it shall give us the possibility of determining at each successive stage of an action the effects produced by rifle and artillery fire, and secondly, that it shall base its decisions upon the effects of the firing just as in battle the result really depends upon them." Meckel further demands that the umpire or referee shall "note in a current account all the losses of each unit as they occur, in order to be able at any time to determine the amount of *loss of moral factors* which any unit has suffered up to any given moment. This moral weakening coupled with the exertions the unit has already undergone will be the data from which to ascertain the unit's remaining fighting energy. The fighting energy of the several units must be the foundation for all the umpire's decisions."

Meckel published with his *Studies* an elaborate table from which to extract with the aid of the die the losses caused by infantry or artillery fire. He distinguished three kinds of games; the strategical, to be played on the General Staff maps, from half-an-inch to an inch to the mile; the grand tactical game, in which bodies as large as divisions should be arrayed on either side, and no detailed calculation of losses made; and the regimental War Game for which he intended his table of losses and his minute calculations. For this game he proposed a map on a rather larger scale than had been customary, $\frac{1}{8000}$ instead of $\frac{1}{10000}$, or 10 inches instead of 8 inches to the mile.

The appearance of Meckel's studies in 1873 marks an epoch in the history of the War Game. The first result appears to have been that the old systems finally disappeared. It is true that in 1874 new editions both of Trotha and of Tschischwitz appeared, but the new editions, though they gave new tables of losses, did not give the effects of infantry fire any more essential place in the game, and apparently they never attained to popularity. The first English official text-book was published before the *Studies* appeared, and was compiled from a German original published before the war of 1870. It was based entirely on the traditional conception of a game, and became obsolete on the appearance of the *Studies*. The revised book of rules published in 1884 is a compromise. Tables and rules in the old style are given, with the old fault that if the rules were followed the effect of firearms would have very little influence on the result;

but the statement is made that "Reference to the loss tables should be avoided as much as possible, the tactical situation being the basis of the umpire's decision." This seems to me to contain an admission inconsistent with any high estimate of the value of the book in which it appears. Thus the English manuals of the War Game belong in value if not in date to the epoch before the publication of Meckel's *Studies*. In Germany there has been since then some progress in two directions. In 1875 Meckel published the first portion of a guide to the game, calling it "Directives for the War Game." He gave a new set of tables for calculating the losses by fire; introduced several improvements into the apparatus, and published a map on the scale of $\frac{1}{25000}$ of an imaginary piece of country.

In 1876 was published General Verdy's "Essay on the War Game," the detailed description of a game worked out from beginning to end. This is the classical example of what I have called the free method of umpiring, and is I suppose one of the best known of military books. In 1877 appeared an essay called the "Regimental War Game," by Lieutenant Naumann of the Saxon Rifles. Lieutenant Naumann's object was, as Meckel's had been, to produce a system capable of employment in societies where there was no famous umpire, no person of unquestioned authority upon tactical matters. He adopted from Meckel the scale of $\frac{1}{25000}$ for his map (which, however, represents actual country) and the two leading ideas, viz., careful calculation of the effects of fire, and determination of the issue of every action upon the basis of those effects. He also tried to ascertain, by comparing a number of regimental histories, the average number of hits obtained at each of the different ranges, which he estimates at about 5 per cent. of the average number of hits made at the same ranges in peace practice. This series of figures, worked out for a Prussian subdivision of a company (*Zug*), he transferred to a scale, placing the figures in four rows according to the closer or more open formation of the enemy fired at, and placing each set of figures at a distance corresponding to the range from the initial end of the scale. The scale so made was of a peculiarly easy and ready help to an umpire in the calculation of losses, for it supplies him at once, for every range, with what may be called the normal average number of hits to be expected in action. This figure is then a safe datum which he can modify according to his view of the special case. Naumann also gave much attention to the question of how the "remaining fighting energy" of any body of troops is affected by the losses inflicted upon it. A company, he says, can lose 15 per cent. of its men without flinching. It must be considered as much shaken after losing from 25 to 36 per cent. according to circumstances, and will be altogether put of action by a loss of 50 per cent. The data thus given by Captain Naumann to assist in the determination of the effects of fire and in the application of those effects to the decision of combats are of immense practical use to an umpire who is not an authority. They were a priceless boon to the Manchester Tactical Society in the practice of its earlier years, when it would have been almost impossible to umpire without the use of "Naumann's scale." Apparently they have been found

useful also in other quarters, for I see that Colonel Bilimek, the careful historian of the Slivnitza campaign, in his exhaustive essay on the conduct of the War Game, adopts *en bloc* both the scale of losses and the calculation as to their moral effects.

With the publication in 1881 of Naumann's second edition, the development of the War Game in Germany seems to have attained for the present to completion, and more recent progress has been in a slightly different direction, to which I propose shortly to call your attention.

Before leaving the historical part of my subject, I may perhaps venture to remind you of the latest official mention of the War Game in the land of its birth. The "Order of Service in the Field," published last year as a substitute for the "Regulations" which had so long been familiar, has prefixed to it an "Introduction," in which the purposes of a soldier's training and the principles which should guide it are briefly set forth. It is almost aphoristic in its concise clearness, beginning with the practical statement that peace training must be regulated solely by the requirements of war. This introduction, aiming at cutting down training to essentials, enumerates the aids to training which can be given by theory. First in the list comes the War Game, of which the writers say: The War Game, *under skilful guidance*, will give plentiful occasion for the study of our regulations, of tactical principles and facts, and will also offer the opportunity of rapidly forming decisions.

Reviewing the principal phenomena which I have tried to place before you of sixty years of the War Game in Germany, we find that the attempt to conduct the practice as a game by the aid of a set of rigid rules broke down with the arrival of modern firearms on the battle-field. The only War Game now found to be practicable is a manœuvre on the map conducted by an umpire; but the umpire is obliged to base his decisions upon the actual facts of modern fighting, and where in this respect his personal authority, his own confidence, or the confidence of his comrades in his judgment is insufficient, it has been found desirable to supply him, not with rules, which are impossible, but with aids towards the formation of a decision. The tendency has been for the regimental War Game to increase the scale of the map and the minuteness with which the details are worked out, while at the same time where an umpire of extended knowledge and mature judgment was available, the combat of large bodies has been practised, and the umpire has been expected to summarize in his own mind the otherwise tedious process of deciding the issue.

In the studies to which I have so often referred of Major Meckel is an essay on the importance of the War Game for the intellectual training of the Officer in the art of command. There is authentic evidence that the views in this essay represented at the time the opinions current among the leaders of German military literature, in particular those of Verdy du Vernois and Scherff. "The object is," says Meckel, "to afford to the regimental Officer who is so entirely absorbed by the practical duties of his profession the opportunity of training himself for his duty as a commander of troops in battle.

Such an opportunity is given him without too great a cost of time or trouble by the practice of thinking over and solving military problems in his mind. "The only means, and a very excellent means, of attaining this end is the War Game." Meckel is very anxious to urge the peculiar value of the War Game, for the company or field Officer. He gives a list of seven advantages which he alleges are derived from the practice. The War Game he says, assists the Officer to realize for himself the general nature of the operations of war; it affords constant practice in the composition of orders as well as in their interpretation, and in the peculiar form of discipline which consists in subordinating his own opinion to that of his superior. The War Game is a perpetual study of ground; it necessitates an endless series of tactical calculations and resolves; it is continually teaching principles by their application in concrete cases, and is always, to those who are interested in it, an incitement to fresh study. These seven theses Meckel develops and defends through seventeen pages, and concludes that "the War Game is destined in the future to become one of the most important means of training the combatant Officer." You will, I am sure, prefer to be spared the rehearsal of seventeen pages in praise of the War Game; but I will venture to underline one or two of the advantages claimed.

In the first place, as to the composition and interpretation of orders. Almost every text-book of tactics reads the student a lecture on the importance of clearness, conciseness, the right arrangement in the framing of orders, and the maxim is laid down that if an order is capable of being misunderstood, it will infallibly be misunderstood. The volunteer Officer never has any opportunity whatever of either composing or interpreting orders such as he might be concerned with in the field. Moreover, in the ordinary course of his training, he never receives one syllable of instruction on the subject. For this reason I am disposed to attach a peculiar, possibly an exaggerated importance, to the form of those orders in the War Game which alone are usually deliberately prepared—those emanating before the actual game begins either from the umpire or from the combatants, and to the form of all written messages. In particular, it is desirable to avoid such orders as depend upon future contingencies, at least if the authority giving the order expects himself to remain with the troops that receive it.

The value of the War Game as a study of ground and as a study of map-reading depends of course upon the value of the map. Upon this point, three principles have always forcibly presented themselves to my mind, which I venture to lay before you for what they are worth. I think the map used should invariably be a map of real country, if possible it should represent ground accessible to the Officers who use it, and it should represent all those features which have any tactical importance. A difference of level amounting to 12 or 15 feet is amply sufficient to conceal the movements of any body of troops, and therefore no map can, as it seems to me, be adequate for the purposes of the regimental War Game unless it represents such differences. The German map of Königsgrätz gives contour lines at

intervals of 12½ feet, the maps of the battle-fields of 1870 at intervals of 5 metres, the new War Game map of Schweidnitz, published by the Prussian Staff, has contours at the same interval, but the English map has no contours nearer than 50 feet from one another.¹ I cannot help thinking that a great boon would be conferred, at any rate upon volunteer Officers, very few of whom have the opportunity of making themselves acquainted with the country round Aldershot, if the authorities were to provide maps of the neighbourhood of the principal volunteer centres, giving a sufficient number of contour lines. The old 6-inch maps, where they exist, might readily be completed in this way by Officers for their own use. In the Manchester Tactical Society 25-inch maps, filled in with frequent contours, have long been used for a minor War Game, and Colonel Aspland, who took upon himself the labour of surveying and drawing in these contours, has assured me that he found the work of the greatest benefit to himself. I am perfectly certain that very few volunteer Officers have any idea of the amount of information which can be extracted from a map contoured at short intervals, and I know, from experience, that nothing more opens the eyes upon this point than the use of such a map for the War Game, coupled with such aids to its interpretation as Naumann's "measure of visibility." While on the subject of the apparatus I may venture also to suggest that the cost of the pieces at present supplied by the Government might be considerably reduced by reducing their number. The ordinary regimental game does not require more than a few pieces for each side; why should the regiment be compelled to buy two Army Corps?

The principal advantage, however, which is claimed for the War Game is the practice which it gives the Officer in deciding what he ought to do in a given situation. It is not enough for the Officer, when he finds himself in the field, that he should have his head full of what is called "valuable information;" he has to make up his mind what orders he will give, and the more he runs through in his head the doctrines laid down in text-books on tactics, the more he will find himself embarrassed. The particular case in which he finds himself always comes under one of half-a-dozen apparently contradictory maxims; which is he to follow? No text-book and no effort of memory can decide for him, but a sufficient amount of practice in the War Game will make the decision comparatively easy. Even military history, valuable as it is if rightly used, will not prepare the Officer for war unless he has learned to apply it. It is not, however, merely the habit of deciding what can be learned from the War Game. There is no greater source of difficulty to the commander in war than the uncertainty in which he must always find himself as to the enemy's movements and intentions. According to General Sherman, the most remarkable quality of General Grant was that "he was never scared by what the enemy might be doing beyond his sight. He gave his best attention to learning the position, strength,

¹ A very interesting illustration of the great importance attached in Germany to even minute differences of level will be found in the introduction to the third (1874) edition of Trotha's pamphlet on the War Game.

and probable plans of his adversary, and then made his own plans as best he might to foil or overthrow him, modifying or changing them only after it became clearly necessary to do so; but never lying awake of nights trying to make plans for the enemy as well as for himself." The quality thus described, though natural to Grant and probably to all great commanders, may yet be acquired by cultivation. I remember some years ago asking a friend of my own, who shared my high opinion of the value of the War Game, what he thought was the most important lesson learned from that practice, "You learn," he replied, "not to get flurried over what the other man is doing."

The exact expression by which I can best convey to you my belief as to the value of the War Game is supplied to me by a peculiar coincidence. I was reading lately a very valuable essay by Major (now Colonel) von Gizycki, of the Hanoverian Field Artillery Regiment, on the practical use of military history. At the very beginning he puts his finger on what is generally the weak point. "Most men," he says, "set out to seek knowledge only and not judgment." Since that was written in 1881 Colonel von Gizycki has done a great deal of work contributing towards giving military studies their true direction; and as I was preparing this lecture I received a letter from a very distinguished English Officer, commending Colonel Gizycki's work as constituting "the very best kind of instruction—that which trains judgment and not knowledge only." The ideal which the German writer has thus set before himself, and according to a competent English judge has attained, exactly corresponds to the effect of the War Game if carried on in the right spirit. But the spirit is everything, and of the War Game as of nearly every other activity it may be said that a man brings away from it what he takes to it. The Officer who is anxious to learn the secret of the art of command—of "troop-leading," to use the modern barbarism—may learn a great deal from the War Game. But I believe it is necessary that he should come to the game duly prepared. The players require, of course, a knowledge of the functions and method of the employment of the three arms and of the principal formations of their drill regulations. They must also be able to read the map. This is the indispensable minimum required from every player. But even this is capable of several interpretations. Very little is really learned by the perusal of a text-book. The most satisfactory method of getting an insight into the nature of battle is by the close study of some particular battle, which must be taken from recent history lest its lessons should no longer be up to date, and should be studied in the most detailed account that can be obtained, and with the aid of the best possible map. The very best method is to go to the battle-field with map and history in hand. A second useful study, equally necessary to the real appreciation of the methods of handling troops, is to read some of the controversy upon the subject which was excited by the Franco-German War. The German Officer takes his Field Exercise and his Regulations for Field Service, and finds in them the sifted deposit of the tactical experience of all modern war. They are a perpetual guide to him in all his studies, because the best intelligence of the

German Army is employed in keeping them up to the level of the time. The English Officer has no such guide, and accordingly if he really wants to understand is driven to go behind the Regulations and to study the controversial literature. But this study, if carried on in the spirit that seeks not to find fault but to understand, is probably the best commentary on military history, and one of the best aids, if not the best, towards the formation of a tactical judgment. In proportion as the student accumulates the materials upon which his judgment can be based, he should try to find opportunities of exercising it in concrete cases. The War Game is only one form of such exercise. A second, and a very profitable one, consists in the working out of tactical exercises without troops upon the actual ground where they are supposed to happen. A third is to be found in the solution of tactical problems on a map without pieces or opponents, and may well be joined with the study of military history. This is the practice which in Germany now is most closely associated with the War Game.

These, as it seems to me, are the studies out of which the practice of the War Game should arise, and up to which in turn it should lead, the preliminary studies to be pursued by all who may wish to become umpires. It is no longer possible to draw up rules by which the practice can be guided, and the players are therefore now entirely dependent on the umpire's judgment. I am unable to see that the necessary insight into the nature of war can be obtained by any simpler means than those I have described.

But all this trouble would not be worth taking if the only result were that it made the Officer a capable umpire at the War Game. It seems to me worth taking for another reason, that it is, so far as I can judge, the only way by which a volunteer Officer can train himself to be a leader of men. Such a result, the conversion of volunteer Officers into real leaders, appears to me an object of national importance, and likely if it is achieved to be fraught with beneficial consequences the extent of which no man can measure. The time when volunteer Officers were playing at soldiers is pretty nearly over, and most of them are now willing to take pains to become Officers in fact as well as in name. But they do not want to run after a will-o'-the-wisp; and it is not good that they should fritter away time in unprofitable discussions or waste their energies in the pursuit of crotchets. They look for guidance from the leaders of professional opinion. They want the direction indicating by some acknowledged authority. Many of them, however, are deterred from indoor studies by the impression that books, problems, and War Games are not "practical." In opposition to that too common opinion I have put forward a different view. My main contention has been that the War Game, carried on under capable guidance, is an invaluable and indispensable part of an Officer's training, though its value must always depend on the capacity and military insight of the umpire. This conclusion I have endeavoured to present to you as the net result of sixty years of the history of the game in the Army where such studies are most at home. No doubt every man's interpretation of history is determined

to some extent by his own experience, and I may confess that the shape of my sketch of the War Game has been reached through a long series of failures. I have had some experience of how not to do it. Indeed, one of the great merits of the War Game is that it gives us the chance of making mistakes without serious consequences except to our own vanity. But its greatest merit is that it brings Officers together and makes them not only comrades but friends. Many of the happiest hours of my life have been spent working over the map or discussing problems in the field with a small group of brother Officers. For a number of years we have blundered together and discussed our blunders. Little by little we have made up our minds on most of the questions with which as Officers we have to deal, so that the view of the Officer's training upon which I now ask for your verdict is neither untried nor peculiar to myself. It is that of the Manchester Tactical Society.

Major-General G. H. MONCRIEFF: I always find at these lectures that the sooner somebody has the pluck to stand up and begin, the sooner the rest of those anxious to speak follow his example. As President of the Tactical and War Game Society in the home district, I have the pleasure of working a good deal at the War Game. I perfectly agree with the lecturer that this affords a most valuable training for Officers. Our society in London is carried on at the Westminster Town Hall, where we meet twice a month during the winter, and the tactical exercise is generally worked by Officers of the Auxiliary Forces, sometimes militia Officers against militia, and at other times volunteer Officers against volunteers. Captain Wilkinson has alluded to composition of orders, and I should like to say here, what probably no volunteer or militia Officer would like to say of himself, that the composition of orders which have been furnished on the day of the proposed exercise to the chief umpire has been this season marvellously accurate. They have been drawn out in the very clearest way, very often—difficult orders to give out—showing immense attention and very great grasp of the necessary knowledge on the part of the Officers of the Auxiliary Forces. I certainly do congratulate them, as Colonel Hale and other umpires have done, and there is no doubt that it is a very useful practice. We have not yet got in London Captain Naumann's scale, but certainly I hope we may do so, as it should materially assist us in quickening the game. The only difficulty to my mind in the whole question is that it does take a very long time, extending sometimes from five o'clock, with an interval, up to nearly eleven; of course, that is asking a good deal of time, particularly as most of us are busy during the day. The power of reading maps is certainly becoming a most useful and very well-developed matter in the Auxiliary Forces. I shall never forget many years ago an Officer in my own regiment—we were on the march—I had my map, and was looking at it. I said to him, "I wonder where we are now?" "Oh," he said, "I do not know; I never could read a map in my life." Well, he has learned to read a map since, and is a very good Staff Officer now, but it really did strike me at the time as being very odd. It might amuse you to know how I once saw a War Game played in Dresden. I dined with the Grenadiers of the Guard at six o'clock, rather a long dinner, and a good deal of tobacco was consumed afterwards. When I left at about nine o'clock, I was amazed at seeing the War Game had been produced, and I was told that the Subalterns of the regiment and one of the senior Officers amused themselves in that way after a rather long mess dinner once or twice a week. I do not know what the Officers of our regulars would think about that, but I can hardly believe it being a very successful study under such circumstances. In conclusion, I will add that if anyone comes to Westminster Town Hall, we shall be very glad to show them what we can about the War Game.

General Sir ROBERT HUME: I think there is not the slightest doubt that the War Game is of the greatest use, especially, as the lecturer has said, to the Officers

of volunteers, and those who serve at home; but the War Game as played at present, I imagine, is only applicable to European wars. I do not know if it has been in any way adapted to the study of wars such as we are usually engaged in. What I mean is whether it would be possible to compile a War Game that would be applicable to some of the circumstances in which we English practically find ourselves when engaged in non-European wars. It would certainly, to my mind, be a very useful thing if anything of the sort could be drawn out that would be at all applicable to the circumstances which we practically have to deal with; for I imagine that however much we may learn as to the proper way of leading troops in large European contests such as we read of in the books of tactics that we study, particularly the German books, still those are circumstances with which we may never have to deal, and so I think it would be a very good thing, and I should think that General Moncrieff probably might assist in carrying out the idea I wish to put forward, to have something in the shape of a War Game which would be of practical use to us in our everyday fighting—would be of more use to us as soldiers and to the younger Officers than the present War Game, useful as it is.

Colonel MATRICE: I think I may venture to say that it seems to me that if the Kriegsspiel will give us, as it undoubtedly does, the habit of following movements of troops upon ground, and following the movements of troops upon maps, and bring those two in relation to one another, that would be equally applicable to our small wars as to Continental warfare, and that as it happens the relation of maps to ground becomes particularly important in reference to our small wars, because usually we have to make our maps expressly for them, and thus it becomes extremely important that we should become well acquainted with the relation which the maps actually bear to ground, and should apply to them such corrections as experience teaches us are necessary. The very best point connected with the War Game seems to be this, that a man who is working one of the sides with a number of subordinates under him sees and feels for himself the difficulty of issuing a set of orders so constructed that when they get to his subordinates they shall be so clear that his subordinates shall know exactly what he intends them to do under all circumstances which may occur, and yet shall not so tie them as to prevent them from exercising their discretion where their discretion ought to be used. The War Game, if properly carried out, makes a man think for himself. We learn, as I have said, from our own mistakes, and also from the annoyance and irritation which constantly attend one in seeing subordinates carry out, in quite a different way from what had been intended, such orders as have been issued. Practice in receiving and issuing orders, so that they get to be rightly interpreted, is certainly an experience which is as applicable to our small wars as to any Continental wars, and it connects itself with that kind of training for military operations, learning to play one's own part in a large whole, which is after all the most important element connected with modern war; and which would be applicable to our small wars as well as to Continental warfare. I do not myself see how it would be possible, with the class of small campaigns we have usually, to get an area of ground so limited as to make any actual fighting conveniently apply, or to construct maps that would be available for the purpose of our small wars, for this reason, that in almost every separate campaign in which we are engaged there are conditions distinct from every other campaign. It therefore appears to me that you would get much more value out of the game if you are able to compare the wars of which we have the fullest and most complete accounts on the Continent, with the experience of the Kriegsspiel in relation to moving troops, than you would from the accounts that we are able to give of our small wars. In conclusion, I hope that Captain Spencer Wilkinson's lecture will attract attention generally to the most admirable history of the Kriegsspiel with which he has supplied us in one of the Manchester Tactical Society's papers, and I may state generally that the body of papers published by the Manchester Tactical Society are such as, I think, any Officer in the room would be delighted to read, and I am sure very great credit is due to them for the work they have to done. I can only for myself speak of the instruction which I have got from Captain Wilkinson, from the knowledge which he has of German work and German experience, not only in relation to that particular history of his, but also to other matters, such as the continual application which he has been able to give for

a number of years to following up what has been done in Continental armies, the study of which must be very valuable to any Officer who follows it up. It is also one of the instances of the great assistance that we get from volunteers that we should receive such a paper from one of themselves as we have heard to-day.

Mr. COPEMAN, Norfolk Rifle Volunteers: There is only one observation I wish to be allowed to make, and that is with reference to the difficulty, which has been referred to by one of the speakers, of reading maps. I consider it a particularly difficult operation, especially to some people, and it requires a certain amount of experience in it before one can approach the ground properly with a map in one's hand. I think we are losing an opportunity practically afforded by the manœuvres carried out among volunteer regiments, when the Officers are not as a rule supplied with maps, so that they can educate themselves as to their use upon those occasions. I know that some of us take out scraps of the Ordnance Sheets, and try to pick our way about with it, and make out as well as we can the operations that are being carried out; but if the War Office would issue maps on thin linen or paper, as I believe they do to field Officers, to every Captain, and perhaps to every Subaltern engaged in the manœuvres, it would be a very great assistance to them in mastering the subject.

Colonel LONSDALE HALE: I owe, Sir, some apology to my friend Captain Spenser Wilkinson, on private and personal grounds, for my not having been present at the reading of his lecture, but my absence was unavoidable. The lecture, so far as I read it, throws an amount of light upon Kriegsspiel generally which we had not available before, and gives us another view of the way in which Kriegsspiel may be conducted. There are, however, many ways in which Kriegsspiel may be conducted, each of them having their own particular merit, and I cannot help thinking that the way in which we conduct Kriegsspiel in this district and in the south has advantages equal to those which are held up as so excellent by Captain Wilkinson. I do not intend to detain you long on the present occasion, but the fact is, my friend Captain Spenser Wilkinson unknowingly made an attack upon me elsewhere in connection with Kriegsspiel, with the only result that I had the pleasure of numbering a fresh name among my friends, and that in this same lecture he has made another attack on me, probably also unknowingly, and this compels me to reply to some of his remarks. I am perfectly willing to accept his onslaught, and meet it to the best of my power. Captain Wilkinson has published a most excellent pamphlet, entitled "Essays on the War Game," they are very different indeed from the lecture, because in the essays he showed us how the Kriegsspiel ought, in his opinion, to be conducted, and he has not quite entered upon the same details this evening. In that pamphlet he found fault with certain ways in which a particular exercise had been conducted as regards the framing of the "ideas," and to-day he has to a certain extent gone at our official rules for the conduct of the War Game, which were issued in 1884. In the preface, or in the prefatory remarks, my name occurs, mentioned in far too complimentary language, but I had nothing whatever to do with drawing up these "Rules of the War Game;" but the Committee thought it fit to summon me over to Aldershot to conduct an exercise in their presence, which I did. The result was, that the Committee embodied in these rules a very large number of my own suggestions, many of which I recognize. Well, I would have willingly given up every single suggestion which they did embody if they only embodied, as they have done, one in particular, and that was, "Reference to loss tables should be avoided as much as possible, the tactical situation being the basis of the umpire's decision." Now, I would have given up everything so long as they inserted that one particular recommendation, and of that my friend Captain Wilkinson writes as follows:—"This seems to me to contain an admission inconsistent with any high estimate of the value of the book in which it appears;" that is to say, he thinks the book worth nothing very much, because my particular recommendation is in it. That recommendation is just the whole principle upon which we carry out Kriegsspiel in this district. We decline to go into this question of losses which, so far as I understand Captain Wilkinson's lecture, is the very basis of the German "Regimental War Game," and of Meckel's system. Everything in that exercise depends upon the destructive power which is assigned to the weapons used in that exercise, and that is one of the most purely conventional estimates that could

possibly be drawn up. He tells us that some German Officer went through regimental histories, and found out what the effect of shots were at the different ranges. Colonel Paul Methuen and I have been through a good many of these, and we should, I am sure, have to look far into them to find anything whatever to throw light upon the subject. Where on earth Lieutenant Naumann got the notion as to the amount of cartridges fired, and the effect of different shots at different ranges, is simply inexplicable, and I do not believe in its reliability for one moment. He has simply drawn up some system of averages, and you may give a system of averages for everything; but it is purely and entirely conventional. The whole essence of this subject is that the carrying out of the exercises depends upon the losses. Those of us who used to work at Kriegsspiel many years ago will remember what that sort of loss business was, eventually resulting, after prolonged calculation, in the loss of half a man, or something of that kind. I do not understand these tables which appear in Captain Wilkinson's "Essays on the War Game," but I see half a man is allowed for those at some ranges, and the question is, is it worth while to go into all these things in carrying on Kriegsspiel? It is not the view of Colonel Methuen, Colonel Cooper King, General Moncrieff, Colonel Stirling, myself, or of others, with regard to carrying out the War Game; it is not merely our own dogmatic idea that we can do without these losses, but we have on our side the writer of this little book I hold in my hand, Verdy du Vernois. His system of Kriegsspiel ignores altogether losses. There is no greater name in Germany, with regard either to these exercises or tactical exercises generally, and therefore the name under which we shelter ourselves, if we want to do so, is sufficient; only we adopt V. du Vernois's system as a matter of common sense, and more applicable to the English Army. General Verdy du Vernois speaks, in the preface to his book, which has been translated by Major Macdonald, in this way. He is speaking about these rules and the use of the dice and tables of losses: "It is indeed only by severe toil and a great expenditure of time that any one who has not learned the game by actual practice can, through unassisted study of the books of instruction, so thoroughly master the subject as to be competent to conduct the conduct of an exercise of this kind. So it comes about that there are assuredly in the smaller garrisons many Officers who should be especially fitted from their position to take the matter in hand, who utterly shrink from doing so;" and it is this terribly monotonous work in carrying out umpiring at Kriegsspiel that has kept so many Officers of the higher ranks from undertaking that work. They have not looked upon it simply as a tactical exercise, but a game carrying with it a great number of rules and calculations. "I in no way underrate the service which the recent books of instruction, with their rules, their dice, and their table of losses have rendered, and will render in the future. It consists chiefly in this, that the umpire finds in the rules fixed principles by which to limit the capacity and fighting power of troops, and define that the effective use of weapons gains full credit by means of the tables of losses, and that dice, which gives to chance its due influence, provide an apparent security against partiality in the decisions. The question, however, arises whether the game might not be made even more useful than it is if the difficulty of execution and the expenditure of time which the ever mechanical divisions involve could be avoided." That we all wanted to do when we began to umpire; we wanted to get rid of all this dreary monotony. "Experience shows that this question can be answered in the affirmative." And then he proceeds to speak of the instructive excursions which are carried on over the country by certain Officers of a garrison, just the same as those who work a Kriegsspiel. "It has never been found," he says, "needful in these excursions to settle the requisite decisions by the chance of dice, the umpire gives it according to his own views; neither is it thought necessary to investigate in the closest detail the effect of weapons. It is found sufficient to arrive at the general conclusion that one body has suffered certain severe losses, or that it has been so shaken that its fighting power is substantially weakened, and whether on the whole it is in a condition to continue to advance under the enemy's fire, or to maintain its position," and therefore, at one fell swoop, General Verdy du Vernois sweeps away all this calculation of losses. And then he goes on to say "You may carry on Kriegsspiel as you like; you may use small maps or you may take Meckel's system and use your tables," but he says, "You can also use my way,

which is the identical way that Colonel Methuen, Colonel Cooper King, General Moncrieff, Colonel Stirling, and myself have been conducting for a long time. We have simply, without perhaps knowing it, been following Verdy du Vernois' method, and which makes Kriegsspiel far less wearisome and far more acceptable to the British Officer than it was when you had got all these calculations to carry out. I only hope that in the course of this discussion some of those who have taken part in Kriegsspiel will bring out some of the difficulties we meet with in carrying it on, difficulties connected with cavalry scouting and so forth, so that Captain Spenser Wilkinson will be able to tell us in his reply how these difficulties are best dealt with.

Colonel METHUEN: I feel rather like one of the gentlemen in the triangular duel in "Midshipman Easy," because Colonel Hale is a particular friend of mine, and so is Captain Wilkinson, but I am forced to disagree. I think that Colonel Hale's attack is a little unfair, because I understand Captain Wilkinson to say that when you have a man who can do the work of the umpire in the way that Colonel Hale can do it, with a light heart, then by all means adopt the way Colonel Hale proposes. Captain Wilkinson says it is not everywhere you can find a man who can act as umpire, and in that case you must fall back on the hard and fast rules. I have had the good luck to see Colonel Hale working, and having done my best to imitate him I find it most wearisome to conduct the War Game as carried out in the way Colonel Hale has found fault with. It is extremely difficult to umpire at any time, so as to make the game go smoothly. For instance, take the cavalry redettes, unless you say to both sides at once, "You recollect that a cavalry redette may have 800 yards circle round him, and see all that he can over in that 800 yards." One saves a vast amount of time and disputing as to what a redette can see and what he cannot see by this system of umpiring. Then another thing is this, I think that the assistant umpires require immense instruction. I find an assistant umpire comes to me and says, "I shall be most glad to assist you in every way, but this is the first time I have done anything of the kind." That is to me absolutely hopeless. What, I think, should be done in these games is that the assistant umpire should meet the umpire, say, an hour before the players come together, and you should move the troops on both sides forward, let me say thirty or forty minutes, till they come into contact, and then let the players commence. I myself have done that, and have found it saves a great amount of time. Then there is another thing I find, which is this, that you give a Division to people who would never probably command more than a battalion. I think that is a mistake. My idea of Kriegsspiel is to give a man who is likely to command a battalion or a brigade, a brigade command. It is no use giving him a Division or an Army Corps. In Berlin the Kaiser's Franz Guard Regiment play week after week their War Games. We used to play the War Game and have supper afterwards, and a friendly game it was; but if I remember right, they worked their Kriegsspiel with far smaller numbers than we have seen it worked here. I went to Manchester last year, and I can speak, as others have spoken, of the immense good that the Manchester Tactical Society have done, the immense interest they take, and the immense amount we have learnt from the most excellent pamphlets which have emanated from that Society.

General MONCRIEFF: I will not detain you a minute. I only wanted to mention that Lieutenant Sharpe, of the 3rd Middlesex Volunteer Regiment, has published a most excellent set of maps, very clearly drawn and coloured. Of course, although, as the lecturer says, it is of the greatest importance to have maps of an actual piece of country, still there is no doubt that when you have worked battles over this piece of country for a considerable time, you sometimes rather want a change. Lieutenant Sharpe has invented a set of maps, so constructed that you can put any map in any possible position on the entire square plan. Each section has roads running out on each side at the same intervals. In one position a little bit of a road may only end in a farmhouse, in another position it may run right through the map; the consequence is you can vary your ground, and the umpire simply has to send with the little sketch plan of the game that he has decided upon, the order in which he wishes the sections of the map to be placed. These maps should be particularly useful for militia or volunteer battalions, who cannot

afford to buy maps of various pieces of country; if they buy Lieutenant Sharpe's set, they have an actual piece of country to start with, and can vary it indefinitely. There is also a considerable sized river, which can be put between any line of sections, or at the top, bottom, or sides of the map.¹

Colonel LONSDALE HALE: Allow me to say one word with regard to what Colonel Methuen said just now. I am rather tired about hearing what has been said about my umpiring at Kriegsspiel. The difficulty of finding an umpire is simply owing to the fact that Officers will not look upon it as a tactical exercise. Now I do maintain theoretically that any single field Officer in the service who might be called out at Aldershot to-morrow to take command of a small force of the three arms, if he is fit for that duty, can very well, with the aid perhaps of a little help in map reading, take charge and umpire at an exercise at Kriegsspiel.

Captain SPENSER WILKINSON: I must confess I am a little astonished at what Colonel Hale has said, because I thought I had tried to convey, with regard to the English rules, that if these rules were followed, the effect of firearms would have very little influence on the result. They also contained the statement of which Colonel Hale claims the authorship, that "Reference to the loss tables should be avoided as much as possible, the tactical situation being the basis of the umpire's decision." That appeared to me to be perfectly right, and I say that when you make that statement, it would seem to destroy the value of the rest of your book, with its tables of losses and its other series of tables. What is the use of publishing a book with the old style of rules, and then saying in your book that you do not want to use them? I think it would have been a great deal better if Colonel Hale's part of the book had been retained, and the rest had been abolished. Colonel Hale asks where are the regiments from which Captain Naumann took his figures? There is no difficulty in answering the question. I will, if he wishes, read the whole list. With regard to any historic fact, especially with regard to war, where is there any single fact at all for which you have anything except doubtful information, and for which you have certain testimony? I suppose nothing is more difficult than to ascertain actually what the effect of firearms has been in shaping any particular battles, and there I quite agree with Colonel Hale; but, at the same time, I shall be very much astonished if Colonel Hale does not say that the next time we go to war, firearms will decide the battles one way or the other, and that the result will depend not only upon the training of the troops, but also on the process by which the Officer prepares himself to train troops, and tries to frame in his mind a certain number of principles on which he afterwards proposes to act. It seems to me the chief factor will be the Officer's view as to the effect of modern firearms, and that he will try to get some idea as to what the effect of firearms will be. If you will allow me to put it for a moment in a sort of personal way, I should say if I have a company, and if I am going to take my company into a sham fight, my first business is to say to myself when I see an enemy, "Supposing these people were firing bullets, where would those bullets go, and what should I do to get my men out of their way until my company is wanted?" I can only have a notion of that by having thought a good deal about the use and effect of firearms, not merely what you get in the old-fashioned Red Books about trajectory, but as regards the effect of a large number of rifles being fired in a particular direction. With reference to the surface of the ground, the questions about the effect of the fire appear to me to be enormously important, and one of the principal things which the infantry Officer has to learn is the real effect of firearms. In what way is this to be learnt unless as far as you can you go back to the history of previous battles? My whole contention is that if you can get Colonel Hale to umpire, you do not want any book or any theory at

¹ The cost of these "Interchangeable War Game Maps" is as follows:—

3 complete maps, on millboard, coloured and varnished ..	£3 3s.
2 boxes blocks (red and blue) with four scales and dividers ..	£1 1s.

Address: Lieutenant S. Sharpe, 3rd Middlesex Rifle Volunteers, The Grove, Hampstead, N.W.

all. In our own Tactical Society, when we have been so fortunate as to get umpires—and I may say we have been fortunate once or twice; on one occasion Colonel Brackenbury himself was good enough to umpire for us—we certainly did not say anything to him about fire scales, we were only too delighted if he would umpire for us in any way he liked, and we would be delighted if Colonel Hale would do the same. But if Colonel Hale says that any volunteer Officer is to umpire, and ought to be able to umpire, without mechanical aids, I join issue with him. Very few volunteer Officers are qualified, and, as far as my observation goes, nothing is so disastrous as volunteer Officers professing to do it when they cannot. What I have tried to put forward is that so long as it is a mere question of rules, which can be worked out by machinery, and I have seen War Games played in that way come out very well; as long as it was mere rules, you did not want an umpire; but when it is manœuvres on a map you must have an umpire whom everybody trusts, some one, like Colonel Hale or Colonel Brackenbury, some good umpire whose word for volunteers is enough. But if it is one volunteer in a regiment umpiring for the others, the players will say, "We should like to know why he wants us to retire. He had better find a reason." That is my own practical experience, and when I look at the history of the game, I say that is the experience of the game in general. With regard to Naumann's scale, Colonel Hale says he does not understand it. That is probably my fault, but, I think, when we come to the Kriegsspiel, at which he is going to umpire, I shall be able to make him perfectly well understand Naumann's scale, and, I think, any Officer who sees it will agree that it is a useful thing to a person who is not an authority. Verdy du Vernois says, "I will in no way refuse to recognize the value of the old tried guides to the War Game, with their rules, dice, and tables of losses. It consists mainly in this, that the umpire finds in the rules fixed regulations which give the limits of what the different armies and the different troops can do." That is exactly what a volunteer wants, some boundary lines fixing the maximum and minimum of probable losses. That is the object of what I have called the mechanical aids, among which the fire-scale is the most valuable. The umpire must say to himself, "The effect of that firing is so and so on those men." He does not necessarily say twenty-five men are killed or half-a-man is killed, but he says, as Captain Hale says, "This fire under these conditions will not produce such serious loss as to cause the company to retire," or "The losses by fire are so serious that the company will retire in confusion;" but surely even Colonel Hale's decision must be based upon the losses. I understand that any decision of an umpire is founded upon what he believes would be the effect of the fire. All that we have to do is to try and find something which will help the volunteer where he finds it necessary to try to umpire. I should like to refer Colonel Hale to a comparatively recent book on the War Game, by Captain Bilimek, in which there is an essay called "Limits of Reckoning the Losses." Colonel Bilimek says what you want is not to calculate half-a-man or two men; these minute losses are only wanted on very rare occasions, and you may practically ignore them, even though given on Naumann's scale, but you do want something to tell you whether the company under fire is shaken or not. I know no other way by which an Officer in the position of most volunteer Officers can settle that, except by some authoritative table or scale. Colonel Methuen said, "Why do you give a man a Division?" The English map is on a scale of six inches to a mile. It is not a scale on which you can work out things in very great detail. In the Manchester Tactical Society we used at first to take very small forces, we never went above a battalion, and we carried on the engagement on the six-inch map; but the moment we came to the detail we found it impracticable, because the map was not on a large enough scale. It is constantly the case with a six-inch map, that you cannot settle enough detail to decide the actual fighting of small bodies; and, therefore, you are driven to renounce the attempt to go very minutely through the actual fighting. As soon as the detail of the fighting is abandoned, the larger units acquire a far greater interest than the smaller ones. When you once get practice in manœuvring, you very soon want to have a Division, or two Divisions, because the divisional commander is the first commander upwards in the scale who has sufficient responsibility and initiative to make the player independent. Moreover, it is very hard to invent

an idea for a very small body which shall be natural and like something in war, and yet shall give the player a real initiative. I agree with Colonel Methuen as regards the assistant umpire. We have always found it is not the slightest use any man trying to be assistant umpire unless he has had a little practice; this work has to be learnt, or else the umpire cannot rely upon his assistants. I believe if Colonel Brackenbury were to tell the truth of what he saw at our Society he would say the same thing. Colonel Maurice alluded to the difficulty of composing orders. It seem to me that the practice in composing orders and writing them is almost the greatest benefit that the War Game gives. The Officer gets an enormous amount of practice in making up his mind, and very carefully expressing himself, so that the subordinate is not too much tied, and yet is likely when occasion arises to do the right thing. I thank you very much for the kind way in which you have listened to me, and I can only apologize for the very rough form of my lecture.

The CHAIRMAN: We shall all heartily agree that we have not only had an extremely interesting lecture but a valuable discussion, which is exactly the object aimed at. It is not for me to detain you after all that has been said much better than I could say it, but there are just one or two little points on which I may ask to be allowed to say a word or two. General Moncrieff very wisely touched upon the point that we English do not take life in quite the same way as the Germans do. Now, I happen to have seen a War Game played in Berlin, and the patience displayed was, as the Germans themselves would say, simply colossal. We could not match it here. On the first occasion when I ever commanded a force in a War Game, I was given a whole army corps, and my opponent had an army corps also. We were placed a long distance from each other, he at Reading, I at Aldershot, and the result was that we fought for a week, and during that week I cannot say that I ever had a comfortable night. Generals are not very much in the habit of fighting for a whole week in the same battle. Certainly I have seen operations which have lasted during three days of steady fighting, but even then they slept at night, which was more than I was capable of doing. That was perhaps owing to want of patience. It happened to me during the 1866 campaign to see a Saxon cavalry regiment move off to the fight, and as I approached them they had the appearance of an enormous brass band. When I got close I found that every man had a long pipe in his mouth, which looked like a musical instrument. It may be these pipes that give them the patience, but the result certainly is that the German has an amount of patience which we cannot imitate. There seems to be a general agreement as to the supreme value of the War Game as a means of tactical instruction and practice, not only involving knowledge but all the qualities that make a man a good soldier, probably the same qualities which make him a good everything else. He acquires knowledge of ground, and of time and space in a military sense, decision of character, and a great many other military faculties which are valuable, and which he has the opportunity of exercising in the War Game. Captain Spenser Wilkinson was kind enough to speak of my going to Manchester; on which occasion, by the way, I wrote beforehand to request that the umpire's verdicts might be absolutely taken as final without any controversy. I was very much struck by the decision, the coolness, the want of flurry in the Officers who played. Nobody seemed the least anxious; they certainly smoked cigars and pipes as the Germans do, and perhaps that has something to do with keeping the nerves steady; at any rate, the steadiness was there, and I can only suppose that it was brought about by the constant practice which the Manchester Tactical Society have in the War Game, and in the tactical studies which relate to it. We all agree that the War Game is specially useful as a means of acquiring tactical knowledge, and developing those various points of character which have been mentioned. But some Officers fancy that the game is theoretical, and that it does not give as much practical instruction in war as there ought to be. Well, you cannot have real war every second day for Officers to learn their duty, and all they can do is to get the nearest attainable approach to it. The nearest approach of all will be found to be tactical manœuvres on the field, and when we cannot have that, then tactical manœuvres on a map, which also give immense practice in that most useful and necessary knowledge, the reading of maps. Men must study nowadays, it is no use pretending. An Officer may be an excellent drill in the barrack square, he may not get his company or

regiment or battalion, or whatever it is, clubbed or turned inside out, but he is not therefore an Officer skilled in the movements of war; he may indeed know nothing whatever about such movements, and yet be what is called "a very good drill." We find that all the best Generals have been students of war. It does not follow that a student is a great General, but I do not think anybody can be a first-rate soldier unless he is both a thoroughly practical man, a man of character, and a student as well. Nor is it the General alone who must study. The youngest Officers in these days have to learn to be tacticians—there is no question about that. Then, again, it is not only the War Game itself which is useful, but the discussions to which every game gives rise. Men say, "So and so, what a fool he made of himself"—"No, he did not." Then a discussion arises at once, and technical knowledge is thereby developed. Certainly, this question of umpires which has been discussed is a very interesting one, and I really do not see that there is much difference in opinion. It seems that the understanding between the gentlemen who have spoken is that as long as there is somebody who is a thoroughly good tactician, who is well acquainted with the War Game, and in whom everybody has confidence, you do not want any rules at all. You say to him, "Judge, speak, we all obey." But when Officers are playing among themselves, they have a little hesitation about laying down the law to each other, and the result is that you require some kind of measurement or calculations to say what are the losses in a general way, and whether a company is likely to have suffered so much that it cannot go on with its work as before. For that purpose the simplest means that can be found would naturally be the best. The want of patience which exists among ourselves certainly leads us not to be able to work the War Game on quite the same elaborate scale that the Germans do. At any rate, we want to see something more lively than they do. We like to have the thing quicker, to have something more for our money. In connection with this, I should like to call your attention to the arrangement which was invented by Captain Wilkinson Shaw. When he was a Garrison Instructor at Aldershot, he designed a most beautiful model of the country on a very large scale. The players were at the different corners of the room with their maps; they played on those maps, but the audience were looking at the model, and the assistant umpires placed pieces on the model showing what was being done on the maps. It was very much more interesting and more like reality to the spectators. The model being large there was not so much crowding round it, and altogether the spectacle was more vivid and enjoyable. That was a little invention of our English own, and I do not see why we should always in everything follow exactly what is done by other people. There is a complaint, how far it may be true I do not know, but it is said that we do not take interest enough nowadays in military work. Certainly, we take more interest than we used to do, but, no doubt, we might take a little more, and I hope we shall do so. Why is it that so little interest is taken in military affairs? It must certainly be because we, unlike the Continental nations, believe that war is far from us, and very likely will never approach us; that we shall never have to do any fighting in the Continental sense—that is to say, none of us will ever have to oppose an enemy who is a thoroughly skilled leader of troops. This is rather an unfortunate thought if it leads us to carelessness in military affairs. There is a sort of principle we all know, in which anything that is distant is forgotten, is not cared about. Now, we read the other day that in China there was an accident; a river burst its banks, and by its overflow four millions of people were drowned, and some two millions more rendered houseless and desolate. We do not think as much about that awful catastrophe as we should if a Bishop were killed in a railway accident in England. It is all very well to say, "We think about what concerns ourselves; we are not Chinese." But neither are we Bishops, and I do not know that any of us here are very likely to be. No; one accident is far off, and the other is near. And we think war is far off, and, therefore, Officers allow themselves to say, "It will never be my chance to have to lead this, that, and the other; and why should I worry about the War Game, or anything else?" That is a very unfortunate state of mind to get into, and I hope it is one which we are getting out of as fast as we can, for, in truth, war may be nearer than is generally supposed. I have now the pleasant task of complimenting Captain Wilkinson in your name for the most admirable account which he has given us of the commencement of the War Game,

its history as it has progressed, and its state at the present time in the country which we are generally accustomed to consider the leading military Power. He has devoted his time in a most praiseworthy manner to the study of this question, and he has kindly brought his whole knowledge to bear upon the lecture which he has given us, for which we all return him our grateful thanks.