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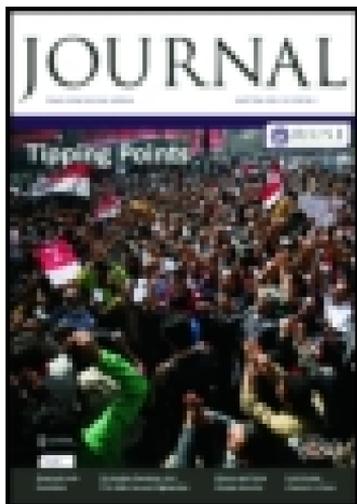
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### Lessons to be Learnt from the Campaigns in which British Forces have been Employed Since the Year 1865

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# MILITARY PRIZE ESSAY.

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## LESSONS TO BE LEARNT FROM THE CAMPAIGNS IN WHICH BRITISH FORCES HAVE BEEN EMPLOYED SINCE THE YEAR 1865.

By Captain CHARLES E. CALLWELL, R.A.

“*Suivez la raison.*”

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### ABBREVIATIONS USED IN THE REFERENCES.

Afghan Official, '78-79	"Anglo-Afghan War of 1878-79" (Confidential).
Zulu Official.....	"Narrative of the Field Operations connected with the Zulu War of 1879" (Intelligence Department).
Mayne .....	"Fire Tactics." Capt. Mayne, R.E.
Burleigh .....	"Desert Warfare." B. Burleigh.
Hozier .....	"British Expedition to Abyssinia." Capt. H. M. Hozier.
Brackenbury.....	"Narrative of the Ashanti War." Capt. H. Brackenbury, R.A.
Goodrich .....	"Report of Naval and Military Operations in Egypt, 1882." Commander Goodrich, U.S.N.
Mobilization.....	"Mobilization and Embarkation of an A.C." Colonel Furse.
Transport .....	"Military Transport." Colonel Furse.
R.U.S.I. ....	"Journal of the Royal United Service Institution."
R.A.I. ....	"Minutes of Proceedings of the Royal Artillery Institution."
Wilson.....	"Korti to Khartoum." Sir C. Wilson, K.C.B.
Wolsley .....	"Soldiers' Pocket Book."
Egyptian Official.....	"Military History of the Egyptian Campaign." (In the Press.)

[In accordance with a suggestion made by the referees, footnotes showing the authority on which statements are made have been added to this essay. The writer has been permitted to refer to the now immediately forthcoming Official History of the 1882 Campaign. When such references are wanting, the information has been derived from Officers who took part in the operations quoted.—C. E. C.]

SUMMER manœuvres on a colossal scale have grown into an institution on the Continent. The Great Military Powers vie with each other in the completeness of their yearly programme, in the appearance of reality infused into the operations, and in the numbers gathered together for the pageant. On this side of the Channel, however, little inclination has been shown for following the example of our neighbours.

Our insular peculiarity in this respect is not without a reason. The British Army has of late years little needed sham manœuvres to train it for the great game of war. Its organization and capabilities have been frequently subjected to the rude test of actual field service. While no severe strain has on any occasion been thrown on

its resources, it has yet coped with difficulties of varied and exceptional character. It has taken part in protracted and hazardous operations in all quarters of the globe. It has passed through sunshine and through cloudy weather.

As developing our remodelled military system, and as affording precedents for guidance in future campaigns under like conditions, the many expeditions undertaken by British troops of recent years are deserving of attentive study. The lessons to be learnt from our wars in Afghanistan, in South Africa, and in Egypt, are many and various, but the experiences gained by no means always point to the same conclusion. Adversaries so dissimilar in their methods of fighting as are the Ashanti and the Arab cannot be confronted with the same tactical formations. Theatres of war differing so widely in their topographical and climatic characteristics as do Manitoba and Afghanistan, call for the utmost elasticity as regards organization and equipment.

Yet in one respect the conclusions to be drawn from these campaigns are in accord. Their history teaches us that when the trained soldier of Europe meets the Asiatic or the savage, the whole system of war undergoes an organic change, and that military science as moulded by the great Continental struggles of our time must be modified to meet circumstances foreign to European warfare.

There is no feature more remarkable in these conflicts than the fact that it is the disciplined army that is obliged to conform its methods to those of adversaries infinitely inferior in intelligence and armament. An enemy who sets fundamental principles of strategy at defiance, whose tactics are ill-defined and unintelligible, whose organization lies merely in the bond of union that will band together individuals for some common end, tends to drag down those opposed to him to his own level. We find ourselves unwillingly compelled to resume the discarded formations of the past. We feel the keen edge of military science in a manner blunted by contact with the savage.

The minor campaigns of the past twenty years abound in examples of recognized rules of war found inapplicable, and they afford admirable illustrations of irregular and disjointed operations. But they serve also to demonstrate what there is of good in our organization, and to lay bare the weak points of our system. The subject will, therefore, first of all be considered from the strategical and tactical point of view; it will afterwards be investigated in its bearing on administration and equipment.

#### STRATEGY.

The speedy decision of momentous issues is a characteristic of the great wars of to-day. The short shrift accorded to an adversary, the rapidity with which one crushing blow follows another, the almost dramatic suddenness with which stupendous conflicts are brought to a close, are the most remarkable features of modern strategy.

But when we turn to our own experiences in dealing with weak

and ignorant foes the picture undergoes a change. We see tedious and harassing operations dragging on towards the attainment of some distant object. Actual fighting plays but a very secondary part in such irregular contests. The prolonged operations in Bhootan, in Zululand, and in Afghanistan, form in this respect a marked contrast to the short and decisive campaign of Tel-el-Kebir; and for the cause thereof we have not far to seek. Our adversaries in 1882 were organized on the European model, and fought in the European method.

*The Initiative.*—Strategists insist that a prompt seizure of the initiative is the first step on the road to success. In Continental warfare this question admits of no diversity of opinion, but in campaigns such as these under consideration, this seizure of the initiative loses its significance. Such opponents as Afghans and Zulus have no intricate mobilization to be checked by rapid movements, no deep-laid schemes to be upset by a sudden *coup*. The circumstances of the case invariably force offensive strategy on the civilized Power at the outset. The initiative is not, therefore, in dispute. It follows then that promptitude in commencing hostilities with a view of gaining the initiative—so desirable in a Continental struggle—is of far less moment at the outset of our minor campaigns. Every nerve should of course be strained to prepare for the conflict, not an instant should be lost in crossing the frontier when all is ready, but it is far better to delay even unnecessarily before venturing on hostile territory than to come to a standstill through inefficiency once the operation has commenced.

The capture of Kabul by Sir F. Roberts is a case in point. During the three weeks that elapsed after the news of the massacre startled India, before the avenging column commenced its march, a dissatisfaction bred of ignorance manifested itself at the supposed tardiness in the forward movement. This was unavoidable. A certain delay was dictated by the necessity of securing an efficient transport service;<sup>1</sup> this difficulty overcome, the thoroughly efficient force attained its object rapidly and without hitch. To have committed an expedition in an unprepared state to an enterprise so hazardous, would have been but to court failure and possibly disaster.

Compared with the swoop on the Afghan capital, the ill-starred attempt to suppress the Boer revolt with a mere handful of men stands in melancholy contrast. Cavalry so urgently needed for the contemplated operations were hastening up from the sea-coast, and strong reinforcements were at hand, yet, in the hope of crushing disaffection by promptitude and vigour, an enterprise was undertaken that with the numbers available could lead but to one result.

While delay in entering upon hostilities will but slightly prejudice the chance of ultimate success, owing to the unsystematic manner in which such opponents prepare for the struggle, any hesitation when operations have commenced is to be deprecated. A pause is interpreted as weakness. The wild tribes that people the marches of our

<sup>1</sup> See "Afghan War," Hensman, p. 5.

Indian Empire, the fanatic followers of the Mahdi, the legions over whom Ketchwayo held sway, such foemen have no appreciation of the resources or requirements of civilization. Incapable of discerning portents unmistakable to the initiated eye, they read in the slow and halting progress of the invader the sure sign of timidity and impotence, numbers flock to the hostile standard, and the resistance to be overcome increases tenfold. Efforts should then be directed rather towards ensuring vitality and vigour in the operations when these have commenced, than towards a prompt assumption of the offensive.

*Descents on a Hostile Coast.*—The latitude of action arising out of maritime ascendancy when a descent on some point in an enemy's coasts is in contemplation, has been well illustrated in the campaigns under consideration. The first campaign on the Red Sea littoral opened with the disembarkation of a force at Trinkitat and successful operations based on that port; a few days later the whole was transferred by sea to Suakin to give Osman Digma battle on new ground. The transference of the British expedition from Alexandria to Ismailia in 1882 is a still more remarkable example. But while the position of an army based on the sea has many advantages it has also certain objections. The surf and nature of the beach at Cape Coast Castle was the source of considerable inconvenience at the commencement of the Ashanti War. The shallowness of the water at Zula necessitated elaborate and expensive preparations for the disembarkation of the Abyssinian expedition. Bad weather prevented the landing of stores during several days at Port Durnford, and so caused the supplies of General Crealock's division to run somewhat short.

Natural harbours such as Trinkitat are not always available, and there, in spite of deep water and good anchorage, the disembarkation of General Graham's small force required several days. While the seizure of the Suez Canal, followed by the appearance of the British Army at Ismailia, was an operation carried out with a secrecy and suddenness that has made it one of the most remarkable military achievements of the day, so great are the obstacles in the way of rapid disembarkation that the advance towards Kassassin was carried out by a mere handful of men almost within sight of the crowded transports on Lake Timsah. Cavalry and artillery had to press on with horses out of condition, and for some days the advanced troops had completely outrun their supplies. But as a disembarkation proceeds the strain is relaxed. It is only at the first that difficulty and confusion are inevitable. As the arrangements for supply were perfected in General Crealock's Division, one fine day in the week was estimated as sufficient for landing requisite stores at Port Durnford.

*Difficulty of bringing Matters to a Decisive Issue.*—One of the most striking features of irregular warfare is the disinclination shown by undisciplined warriors to commit themselves to a general engagement. It is this repugnance felt by our opponents towards decisive

<sup>1</sup> Zulu Official, p. 119, note.

action that is a principal cause of the tedious and harassing nature of such operations. When fearless adversaries such as are the Soudanese, the Ghazis, or the Zulus, charge down on our troops in the open, they sacrifice the strategical advantages they possess, and enable the tactical superiority derived from arms of precision and a well-regulated discipline to assert itself. The pitched battles at Tamai, at Ahmed Kehl, and at Kambula resulted in the slaughter of the best fighting men among the assailants, and in the demoralization of the remainder. The heavy losses sustained by the Arabs at Abu Klea took the spirit out of their onslaught on the square on the following day. After their experience at Amoaful the Ashantis offered a far less stubborn resistance between the Ordah and Coomassie. When the Abyssinians rushed down on the British columns near Arogee, only to be hurled back broken and dismayed, they were paving the way for the bloodless entry into their formidable hill fortress.

If then results so satisfactory can be obtained by bringing on an attack, or by assailing the enemy in his positions, there is every inducement for forcing an action. When the antagonist leans towards operations of a guerilla character, as in the Afghan passes, in Kaffirland and in Burmah, he must be tempted into giving battle. Indeed when choice lies between assailing hostile gatherings even in strong positions and ousting them by strategical manœuvre, there will seldom be excuse from shrinking from decisive action. Tel-el-Kebir is an excellent example of the boldest proving itself the wisest course. To have forced the Boers to evacuate Laing's Neck by some wide turning movement, in place of assaulting their position, would have been but to prolong the war and to miss an opportunity of proving once and for all how utterly fallacious was the hope of our antagonists that they could cope successfully with the British arms. If tactics can decide the issue, allowing, as they do, superior armament, mutual reliance, and the bonds of discipline to come into full play, circumstances must indeed be abnormal to suggest a recourse to strategy.

*Communications.*—Adversaries who have no base, no fixed system of supply, and in consequence no communications, will rarely offer an opening for bringing decisive strategical combinations to bear. While in the Soudan, in the Hill campaigns of India, in South Africa and elsewhere, we have warred with enemies living simply from hand to mouth, and untrammelled by solicitude as to their communications, our own communications have been an ever-present source of anxiety. The theatres of such operations are for the most part sparsely populated and unproductive, the districts through which an army passes cannot supply its wants, and in consequence much, if not all, has to be brought up from the base. Communications thus are of the utmost importance, and are often from the circumstances of the case of great extent. From Zula to Magdala was a distance of 400 miles, from Kabul to Peshawur 160 miles; and the chain of posts from front to rear forms a serious drain on the strength of the forces put in the field. When, as is generally the case, the

population is warlike and inveterately hostile, convoys must be safeguarded and important points secured; and so the fighting force becomes a mere fraction of the whole army. The Khyber line in 1880 swallowed up 20,000 men. But while one side is in these wars tied to its base by a long and exposed line of communications, the severance of which may jeopardize its very existence, the other possesses an elasticity and freedom of incalculable strategical advantage. Dealing with adversaries to whom defeat means simply dispersion, resembles groping in the dark; no sooner is touch of them lost than every inkling of their whereabouts is gone. Some unaccountable influence will on occasion draw down myriads of foemen to contest a point deemed of importance, but they melt away mysteriously when their task is accomplished or their design has miscarried. How different the campaign of Tel-el-Kebir, where the enemy was cognizant of, and capable in rude fashion of applying, modern methods of war, where his organization demanded a cramped and systematic strategy, and so enabled a skilful plan of campaign to be developed against him and carried out in its entirety!

We have laid great stress on the importance of communications. The fact, however, remains that the records of these wars abound in instances where the communications of our armies in the field have been interrupted and have been even voluntarily abandoned. That in irregular warfare the severance of an army from its base is often a matter of no concern arises from the lack of strategical skill on the part of the adversary. If, whether from defective organization or from failure to grasp the situation, no attempt be made by the foe to permanently block the roads on which so much depends, no evil need result to the force cut off. As long as the army thus thrown on its resources be well supplied, it can for a while remain independent of its communications. The Kabul Field Force was for several days entirely cut off from India; General Primrose's division at Kandahar and Colonel Pearson's force at Ekowe were in a similar predicament. But when we turn to the experiences of the small body at Mount Prospect during the Boer War, a marked difference is apparent. General Colley's communications were threatened throughout, and were for a time wholly interrupted. In this case the situation was full of danger, for the Boers comprehended strategical principles sufficiently to appreciate the harm they would inflict by closing in on the rear of the British force.

The remarkable operation by which Kabul was secured at the opening of the second phase of the Afghan War affords an interesting example of a self-contained force purposely casting itself loose from its communications for the achievement of a certain object. Such a course will seldom commend itself in regular warfare. When the object and duration of the movement are defined, it by no means sets fundamental principles at defiance, but it is only in campaigns such as we are discussing, that circumstances will readily admit of the operation. In the movement from Kandahar to Kabul, Sir D. Stewart's Division lost all touch of the rest of the army of occupation, and the same was the case during the memorable Kabul-Kandahar

march. The advance from Ordahsu to Coomassie was made in complete disregard of the closing in of the Ashantis in rear. These operations all proved thoroughly successful. Had the traditions of strategy been strictly adhered to, the forces engaged would have in each case dwindled down to a body incapable of performing the required task. Sir H. Stewart's march to Metenneh is a further illustration; for the posts established at the wells on the track formed mere links in a broken chain. But this operation, so bold in its conception, so creditable to the endurance of the British soldier, and so unfortunate in its failure to save Khartoum, serves further to lay bare the difficulties and dangers to which a force thus adrift is exposed unless amply provided with ammunition and food. For the strain thrown on the small band by the detachment of convoys for the return journey, and the exhaustion of the camels consequent on the marches to and fro, sapped its efficiency. Such voluntary abandonment of communications is admissible only as a temporary expedient when, as in the Afghan marches, a new line of operations is to be picked up, or when, as in the case of the Desert march, some great end is to be attained rapidly and at all hazards.

*Separation in the Field.*—Separation in the field has ever been a fruitful source of disaster. Any combination that exposes an army to defeat in detail is on the face of it faulty. Isandlwana is a terrible example of the mischief arising out of separation, and the reverse on Majuba Hill, where one portion of a British force was overthrown actually in sight of the remainder, is a still more striking illustration. But under certain circumstances the risks attending separation disappear. If each part of a divided army is in itself a match for whatever force the enemy may bring against it, defeat in detail is not to be feared. When dispersion is not prejudicial to security it has much to recommend it. The mobility of an army is in inverse proportion to its size. Movement in several columns therefore facilitates operations. The same forces moreover are at work in preventing the massing of the hostile legions against one fraction of the divided host as tend to safeguard its communications against organized attack, *i.e.*, lack of control over the irregular warriors to whom we are opposed by their chiefs, the consequent absence of concerted action, and the total ignorance of the art of war of our adversaries.

A strong argument in favour of invasion on several lines is in these wars to be found in the moral effect produced on the enemy by the occupation of wide stretches of territory, and in the influence that the appearance of hostile bodies on all sides must exert on a people who know not how to turn the situation to account. The second invasion of Zululand by two separate columns proved perfectly successful, although the mobility of the Zulu impis and the nature of the country offered our adversaries considerable facilities for operating on interior lines. But each of the British forces was in itself capable of giving battle to the vast array swayed by Ketchwayo, and a certain dispersion of the troops was needed to protect the Natal frontier. Ashanti was invaded on several lines. This is not,

it is true, a case of separation in the field, for not a man was drawn from the main body advancing on Coomassie to swell the minor columns, nor would the addition of these to Sir G. Wolseley's compact force have placed it in a better position; the auxiliaries would have in fact proved a serious encumbrance to the main column. Acting in independent bodies they materially conduced to bring about success. The detachments moving on the flanks of the main body confused and demoralized the foe, they forbade concerted action between the tributary chiefs, and hindered them from combining to bar the road on Coomassie.<sup>1</sup> It should be noted that in Ashanti and in Zululand there was no telegraphic communication between the divided parts of our army, and these, owing to the untrustworthiness of messengers, were generally in ignorance of the general situation in the theatre of war. The simultaneous entry of our troops into Afghanistan at several points enabled immense tracts of country to be overrun, and brought home forcibly the prestige of British power in India to the wild predatory hillmen who people the uplands bordering on the Indus Valley.

The Nile campaign affords a remarkable example of separation in the field. One force, quitting the river, struck out into the desert, the other moved almost in an opposite direction along its course. Both columns overcame what opposition was offered them, and were recalled only when the fall of Khartoum suddenly and completely changed the military situation. Insufficiency of transport vetoed the march of the entire force across the Bayuda Desert, and the chastisement of Colonel Stewart's murderers necessitated a move towards Abu Hamed. This is a case where separation in no way endangered the chance of success, as each portion was self-contained, where an advance by the decisive line was possible only to part of the army, and where two distinct objects had to be attained.

*Effect of Bazaar Rumour in the East.*—Bazaar rumour is in the East the channel through which information of every event gains publicity. This subtle agency wafts intelligence from village to village with a rapidity almost telegraphic. The whisperings that announced to the native population the British retirement into Sherepore, were contemporaneous with, if not in advance of, the official news of the events that necessitated the move. Ominous mutterings of impending disaster were rife in the Indian cities about the time of Maiwand. A camp, notoriously the hotbed of groundless rumours, is also remarkable for the manner in which any intimation of projected movements that may be incautiously let drop, is at once disseminated through all ranks. By means of spies this camp gossip filters through to the enemy, who may be thus betimes warned of what is in store. In Egypt, as in India, bazaar rumour is the recognized purveyor of intelligence, and offers facilities for the propagation of false reports. The imaginary enterprise against Aboukir,—to which an appearance of probability was lent by a pretended secrecy—put Arabi and his myrmidons on a false scent, as was hoped, and so paved

<sup>1</sup> Brackenbury, vol. i, pp. 373, 374, and vol. ii, pp. 252, 257, 261.

the way for the seizure of the Fresh Water Canal.<sup>1</sup> On the day that the fleet sailed from Alexandria, 3,000 men were sent to Aboukir from Cairo; it appears that Arabi first heard of the great movement from Alexandria to Ismailia, in Ceylon. In campaigns such as these, opportunity will often offer itself for the deception of a foe by this means. A hint dropped by one in a post of responsibility is passed from mouth to mouth, the news spreads like wildfire through the camp, and in an incredibly short space of time the hostile ranks are in a flutter at the prospect of what has perhaps never been in contemplation. The Egyptian attack on the Kassassin camp a few days before Tel-el-Kebir was made on the strength of a report furnished to Arabi Pasha by Bedouins, who had picked up some cattle that had strayed from the British lines. These represented our force as insignificant, and on the strength of this false intelligence the enterprise was undertaken.<sup>2</sup> This incident serves to illustrate the nature of the information on which our adversaries in such campaigns rely.

*War Correspondents.*—Secrecy is in war the keynote of success. The unquenchable thirst for knowledge of what is going forward, among the surroundings of a commander, renders the task of concealment no easy one; but its difficulty is enormously enhanced by the presence in a camp of persons whose professional reputation in a manner depends on their ability to pry into secrets. Owing to the nature of our adversaries the mischief inherent to the system of permitting a staff of irresponsible war correspondents to accompany a force in the field has not made itself generally felt, but it is none the less existent. It is not from the telegraphic dispatches from the seat of war that the enemy is so likely to gain information, as from the dissemination of news not intended for publication, in the camp itself. The press censorship has generally, moreover, complete control over war correspondents as regards the telegraph. But this is not always so. During the Boer War, the Natal Press was under no supervision, and published intelligence most prejudicial to the interests of the British force. Every movement was chronicled, the position of every detachment at once noted and commented on, so that the Boers were kept acquainted with all that was going forward within our lines. The projected seizure of Majuba Hill was kept absolutely secret till the last moment. Had the slightest rumour of the proposed movement got abroad at Mount Prospect, the enterprise would assuredly not have been unopposed.

The number of press representatives accompanying our armies in the field grows with each succeeding campaign. Obscure provincial journals are beginning to send special correspondents. More prominent papers dispatch a whole staff, and are indeed forced to do so by competition. Some check is imperatively needed. Why should not the public be kept acquainted with the progress of operations solely through the Press Association, or some kindred agency? Under this system the leading journals, in place of each dispatching several individuals to

<sup>1</sup> Egyptian Official, p. 45.

<sup>2</sup> *Ibid.*, p. 71.

the seat of war, would all gain their information from a common source at great saving of expenditure to themselves, and three or four correspondents would suffice for the entire army. It is no argument in favour of permitting the presence of hangers-on with our Army that these will at times do yeoman service. If Officers on leave are forbidden to accompany our troops in the field, civilians should surely come under the same prohibition.

Were it not for the fact that our military records have so often to deplore mischances that arise from under-estimating the strength of our adversaries, it would be superfluous to dwell on the necessity of detailing forces sufficient for what is in hand. The Zulu War was ushered in with disaster largely attributable to the inadequacy of the British columns to cope with a foe so formidable. The train of reverses that cloud the history of our struggle with the Boers was due to the endeavour to make bricks without straw. The Afghan War was not in its earlier stages of a character to impress the East with the military resources of the British Empire. A marked disinclination was manifested at home during the Ashanti imbroglio to place in the field the force considered necessary by the General in command.<sup>1</sup> There seems reason to hope that the humiliating lessons learnt in South Africa have been taken to heart, for in the operations that have taken place in Egypt and the Soudan there is little trace of the penny wise and pound foolish methods of making war, which we have to thank for what has been discreditable in our military history of recent years. For—in the hackneyed words of old Polonius—

“Beware  
Of entrance to a quarrel, but, being in,  
Bear 't that the opposed may beware of thee.”

#### TACTICS.

The strategical superiority that our adversaries derive in these wars from their elasticity as regards supplies and their independence of communications, would place our armies in a sorry plight were it not compensated for on the field of battle. The antagonist once brought to bay, the advantage passes over to the side that has the resources of civilization at its command. The angry hordes that have dogged the columns as they toil painfully through theatres of war bristling with obstacles to the march, go down as wheat before the sickle when modern weapons of precision are brought into play. Confronted with the rifle and the field-piece, assegai and jezail are robbed of their terrors. Individual daring and fanaticism are no match for discipline and mutual reliance.

Man for man the cut-throat Pathan and the Arab of the desert ill bear comparison with the trained soldier of Europe, but it is in the vast array they can place in the field that the true tactical strength of such antagonists is to be found. A brave and warlike people will not view with indifference the intrusion into their lands of a foe however formidable. They gather in their thousands to

<sup>1</sup> Brackenbury, vol. i, Chap. III, and p. 341.

expel the invader. They lurk in ambush waiting for their opportunity. They hover around the flanks of their enemy ready to swoop down at some preconcerted signal. And thus it comes about that insignificant and despised principalities, that remote and unexplored territories will place in line of battle forces ten times more numerous than the army dispatched for their subjugation.

There are few actions in which our troops have of late years figured where this disproportion has not been a feature. At Amoaful as at Isandlwana, at Arogee as at Maiwand, our soldiers have fought against enormous odds. In the lines of Tel-el-Kebir 20,000 Egyptians were gathered together. "They are as the grass," said a Zulu captive of his brothers in arms. The followers of the Mahdi and of Osman Digma appear to have been almost without number. The Boers, on the other hand, claim to have beaten us with mere handfuls of men, but their statistics are untrustworthy, and their skilful tactics prevented their strength from being estimated. When the enemy has given battle without numerical superiority, as at Kirbekan and at Kandahar, the result has generally been to give us a complete and decisive victory.

*Infantry Tactics.*—In irregular warfare, as in great Continental campaigns, it is the infantry that bears the brunt of the fighting, and it necessarily follows that many and useful lessons are to be learnt from these campaigns as to its tactical employment.

Two principal causes have been at work in bringing about the infantry tactics of the present day. The annihilating fire effect of the modern breech-loader calls for dispersed and elastic formations; the necessity of ensuring constant reinforcements to fill up gaps in the firing line has led to the adoption of the system of supports and reserves. In the Boer War, and also perhaps in the Egyptian War of 1882, the conditions that have moulded modern infantry tactics, to a certain extent held good, but not so in the other campaigns of the past twenty years. The hostile fire has not been of a character to forbid solid formations; the losses have not been sufficiently serious to need an elaborate system of reinforcements. Tactical formations must in irregular warfare be of a character to secure an ample development of rifle fire, while maintaining a consistency that will withstand the shock of a fanatical rush. Infantry in storming hostile positions over broken and rocky ground, of necessity lose the rigidity of the barrack square. Yet, when the enemy inclines to onslaughts by great masses of men, these must be met by the infantry standing shoulder to shoulder in serried ranks, unless the terrain affords a good field of fire up to considerable range.

At Arogee the British infantry moved forward in skirmishing order to meet the sudden Abyssinian attack, and drove off the assailants by fire alone. At another point, when the pioneers armed with muzzle-loaders came into line, a hand-to-hand *mêlée* resulted.<sup>1</sup> During the assault of Kirbekan, a formidable body of Arabs suddenly charged down on the Highlanders, who were advancing in scattered

<sup>1</sup> Hozier, pp. 195, 196.

formation, but recoiled before the withering fire of the Martini.<sup>1</sup> At Tamai, on the other hand, the infantry were within a few yards of the deep nullah in which lay concealed the enormous mass of Arabs, when these sprang up and advanced against the square; the rifle had therefore no opportunity for effective action, and to this is attributable the temporary reverse that ensued. The Zulus at Isandlwana came on in such hordes that the fire of the extended British line failed to arrest their progress; the enemy suffered great losses, but the disproportion was such that at no point could a strong front be shown, and the thin line was soon pierced at all points. The fire of the square at Abu Klea was to a great extent masked by skirmishers, and the Arabs thus crossed the dangerous zone with little loss.

When, as in Zululand and in the Soudan, the hostile tactics are essentially offensive, and the onslaught is carried out with vigour and in great superiority of force, an unbroken line must be presented to the charge except on very open ground. At Ahmed Kehl, the infantry were at first drawn up in attack formation, but the onslaught of fanatic swordsmen was so rapid and was pushed home with such daring, that soon every man of the supports and reserves was brought into the firing line.<sup>2</sup> The losses were trifling, therefore this abandonment of the original order of battle arose from the necessity of offering a solid front to the Ghazis. It is worthy of note that at Tamai the lost guns were recaptured by the troops of the broken square in line.<sup>3</sup> The muscular activity of the savage enables him to deliver an attack with great rapidity. The rush of Zulus and Arabs in this respect resembled a charge of cavalry, and allowed little time for the development of rifle fire. In certain of these campaigns then, compact formations, abandoned since the introduction of the breech-loader, are demanded by the configuration of the ground, and by the rapidity and numerical strength of the hostile attack, while the mark thus afforded the enemy is of little moment owing to the inaccuracy of their fire.

While in Zululand and the Soudan the tendency has been to resort to infantry formations of greater solidity than modern conditions of war permit, we see, as a general rule, in the operations in Afghanistan the new order of tactics rendered still more elastic. Circumstances, as a rule, forced our troops to assume the offensive. The topography of the theatre of war was of a character to convert the operations into struggles for the possession of rugged and broken hills, and to bring into prominence the tactics of mountain warfare. Attacks were carried out in a succession of rushes by small bodies, generally unsupported. The Afghans were ousted from their mountain fastnesses by mere storming parties charging from point to point, getting cover behind crags and ledges of rock, pressing on and on till finally the enemy fled before the glint of the bayonet. Such tactics prevailed at the Peiwar Kotal, at Charasiah, and round Kabul, and in the majority of isolated struggles that occurred during the

<sup>1</sup> River Column, p. 160.

<sup>2</sup> Afghan Official, '78-79; Sec. IV, p. 39.

<sup>3</sup> Burleigh, pp. 202, 203.

protracted campaign. The same system of attack was victorious at Kirbekan against Arabs, and at Inyezano against Zulus.

The indifferent marksmanship of our antagonists enables the advance on broken ground to be carried out with little loss, and the moral effect that the steady progress of the assailant, in spite of the heavy fire poured into them, exerts on the defenders, is such as to render a hand-to-hand struggle unusual. The attack on Laing's Neck, carried out after the same fashion, melted away under the well-directed fire of the Boers; there were no reinforcements following to give fresh impetus to the stormers and feed the firing line, and so the result was a disastrous repulse. In such operations, it is of great importance to carry out the advance coolly and with deliberation, to take every advantage of the ground, and to keep up a controlled fire on the enemy. At Laing's Neck the men were exhausted by their scramble up the steep slopes; they appear scarcely to have been allowed breathing time, nor could they reply to the deadly fire from above; there were no supports to fill up gaps in the ranks—everything tended to bring about defeat.

It is not easy to draw the line between the circumstances under which respectively the solid ranks that carried the Arab position at El Teb, and the elastic attack formation again and again successful in Afghanistan, are preferable. At Hasheen, the isolated hill rising out of the tangled wilderness of bush was carried by a steady advance in attack formation, while below in the jungle the Guards in square were hurling back in confusion the Arab charges.<sup>1</sup> In Ashanti, where our adversaries were in great numerical superiority, thick lines of skirmishers were pushed through the undergrowth, and recourse was never had to the square. The tactics of the enemy must be taken into account, their *morale*, their numbers, and their armament. When circumstances permit a resolute foe to meet our troops with actual shock of arms, the shoulder to shoulder formation that has been cast off to meet the development of military science appears unavoidable; on open ground, or where the enemy inclines to stand on the defensive, it will seldom be necessary.

To effectually control the fire of infantry in action is no easy problem. In campaigns such as these, however, the question should be more easily solved, for the troops are not exposed to the breech-loader with its fearful effects, nor to the demoralizing influences of shrapnel and percussion shell, and are therefore more in hand. It is the fashion to sneer at the shooting of our soldiers in recent wars, and to draw unfavourable comparisons between the efficiency of our Army in this respect and those of other Powers. In certain actions there has, it must be confessed, been little fire discipline and bad shooting in consequence; but this is most noticeable in scrimmages such as Abu Klea where the men of necessity got out of hand. Captain Mayne in his "Infantry Fire Tactics" quotes the case of Delh Sarak in Afghanistan, where from want of control all the ammunition was fired away and our troops had to retire to their camp.<sup>2</sup> In the

<sup>1</sup> See "Suakin," Chap. VII.

<sup>2</sup> Mayne, pp. 92, 352.

bush fighting in Ashanti the expenditure of ammunition was altogether abnormal, but fire discipline, or indeed discipline of any kind, is notoriously difficult to maintain in woods, and the fighting moreover lasted many hours. At Ahmed Kehl the expenditure was only nine rounds a man,<sup>1</sup> at Ulundi and Ginghilovo it was little more. At Charasiah, the 72nd, who were many hours heavily engaged, fired thirty rounds<sup>2</sup> a man, and the same expenditure took place in the disastrous sortie from Kandabar. At El 'Teb the troops most committed fired over fifty rounds a man, and at Tamai the expenditure of ammunition in the broken square was about the same, but this appears to be greatly above the average. At Kassassin and Tel-el-Kebir the fire discipline was well maintained, and in the actions at the former place great losses were inflicted by the rifle.<sup>3</sup> The steady volley firing of the right square at Tamai materially assisted the 2nd Brigade in recovering from the confusion that followed the Arab rush.<sup>4</sup> At Hasheen, both on the hill side and below in the thicket, the fire appears to have been well under control. When the Arab spearmen made their charge on the square fighting its way from Abu Klea to the Nile, independent firing commenced but was at once checked by the bugle call, to be recommenced with deadly effect as the enemy got within 300 yards.<sup>5</sup>

Recent experiences all tend to discredit the employment of infantry fire at ranges over 500 yards. At Hasheen the advance up the steep slopes of the hill was carried out without firing till within short range of the summit, when a fusillade was opened to prepare the way for the final rush.<sup>6</sup> When savages gather for an attack it is better to let them come to close quarters; to drive them off by long range fire is to give them an excuse for shrinking from decisive action. To be repulsed in such fashion is not by them construed as defeat.

When in these wars fire has been wastefully and ill directed, it has been generally in cases of sudden confusion as at Tamai and Abu Klea. The most elaborate training in peace-time will not at such times ensure strict fire discipline. When of a sudden the Arab masses rushed from all sides on the working parties constructing McNeil's zareba, there was however neither unsteadiness nor shrinking; parties stood back to back, using their rifles coolly and with a resolution that marks this episode as the Inkerman of these wars.<sup>7</sup> Discreditable incidents such as Deh Sarak have been the exception and not the rule, and the lessons to be deduced as regards infantry fire tactics from the varied operations of recent wars point rather to the necessity of reserving fire for short ranges, than to the evils of independent fire when the proximity of the enemy enables independent marksmen to use their weapons with effect. Volley firing from a square is excellent, but is inapplicable to skirmishers

<sup>1</sup> Afghan Official, '79-80, Sec. IV, p. 40.

<sup>2</sup> *Ibid.*, '79-80, Sec. I, p. 37.

<sup>3</sup> Goodrich, pp. 136, 143, 154.

<sup>4</sup> Burleigh, pp. 157, 228.

<sup>5</sup> Wilson, p. 77.

<sup>6</sup> "Suakin," pp. 143, 144.

<sup>7</sup> *Ibid.*, pp. 174, 175.

advancing rapidly on broken ground, and when tactics resolve themselves into a hand-to-hand struggle with masses of savages the object should be rather to swell the independent stream of bullets than to silence the breech-loader by words of command.

The manner in which units become intermingled during an attack is well illustrated at Tel-el-Kebir, where the Highland Brigade, after having in the space of a few minutes driven the Egyptians out of their formidable works at the point of the bayonet, and having gained a complete and decisive success without suffering serious loss or meeting with any check, was dissolved into mere groups of men of different regiments collected round the nearest Officers.<sup>1</sup> In the hill fighting in Afghanistan this intermingling of regiments was of frequent occurrence. In broken ground intervals rapidly disappear, and different bodies of the same corps are apt to get entirely separated and to attach themselves to whatever may be nearest at hand. How difficult it is to maintain the intervals between the different lines in the attack formation was demonstrated at Hasheen, where the supports of the Berkshire as they pressed up the hill closed on the firing line as this reached a saddle near the summit, and the large concentrated body of men thus formed a target for the Arabs above till the original formation could be resumed.

The square formation employed so frequently in Soudan warfare has led to much discussion, and is the subject of great diversity of opinion. The tactical objections to this order of battle are manifest and undisputed. A square forms a target that even bad marksmen can hardly miss, it does not lend itself to that development of fire so desirable with modern weapons of precision, on the move it is an unwieldy and cumbrous formation, and if penetrated by an enemy disastrous confusion must necessarily ensue.

The experiences of Tamai and Abu Klea are a powerful argument against the square formation. It is difficult to conceive a more thoroughly false tactical situation than that of a square broken into by an onslaught of foemen so daring, so nimble, and so numerous as were the Arabs in these fights. At Ulundi, on the other hand, at Abu Klea, and at Hasheen, the enemy advancing in great preponderance of force was beaten off before reaching the squares. Whatever then may be said theoretically against this formation it has not generally proved a failure when used on the defensive. The desperate struggle at Tamai resulted from the attempt to attack in square. The obvious lesson to be deduced from Abu Klea is that in a square as in other tactical formations a reserve is required ready to fill up a gap should this occur, whether from the units being not properly closed up, or from the actual shock of hostile attack. Arab tactics, indeed, appear to demand a small reserve at each corner, for their assault was generally delivered against a salient. That the ill-directed fire of savages is effective against troops in this solid formation, and that the square is difficult to manœuvre, are facts that cannot be controverted. Still, where the terrain offers the foe such facilities for lying in ambush, where the attack when it comes is delivered with fanatical

<sup>1</sup> Egyptian Official, pp. 90, 91, and 98.

desperation, and from all sides at once, where the deft and skilful tactics of the antagonist of necessity lend to the onslaught the character of a surprise, it seems better to offer a mark for hostile bullets and to sacrifice mobility, than to risk irretrievable disaster. It has been urged that the square formation has been the outcome of carrying unnecessary impedimenta to the field of battle: but artillery, reserve ammunition, and ambulances in some form must accompany a force, and must be protected. That our troops at Ahmed Kehl, drawn up more or less in line, beat back the Ghazi assault, shows merely how well adapted is this formation against frontal attack, and is no argument against the square in cases of enveloping attack.

At Abu Klea skirmishers masked the fire of the square, caused some confusion as they hurried back for shelter, and were a source of weakness rather than security.<sup>1</sup> They appear to be out of place under such circumstances.

The normal attack formation has in these wars been rather the exception than the rule. In the Egyptian War of 1882, it was used with success at the reconnaissances in force from Alexandria<sup>2</sup> and the fights at Kassassin. At Tel-el-Kebir, General Willis's Division, coming under a heavy fire from the Egyptian works, assumed the attack formation;<sup>3</sup> the supports of General Graham's brigade joined the firing line at the ditch, and all charged on the parapet together. The Hasheen Hill was stormed in regular attack formation. At Ahmed Kehl it soon resolved itself into a line,<sup>4</sup> and the same appears to have been the case at Maiwand. Hostile tactics and configuration of ground have in fact tended either to render the elastic formations of European warfare still more loose and dispersed, or else to forbid their employment altogether, and to replace them by rigid orders of battle discarded since the days of the muzzle-loader.

*Cavalry Tactics.*—The absence of organized horsemen in the ranks of our opponents robs the cavalry tactics in these campaigns of much of their interest. Bodies of Afghan swordsmen played a conspicuous part in certain actions of that campaign, the Boers consisted almost entirely of mounted infantry, in Egypt regular squadrons appeared in the field, but as a general rule our cavalry have had to deal rather with dismounted than mounted opponents.

The breech-loader has tended to cramp the action of cavalry against infantry, and to reduce the rôle of mounted men on the battle-field to insignificant proportions. Experiences in Afghanistan, in Egypt, and in the Soudan, serve to show that for irregular warfare, on the other hand, this arm has still a great tactical importance. The clearing of the Siah Sing heights of swarms of the tribesmen drawn together by Mahommed Jan was a signal feat of arms. During the Egyptian War the constant pressure of our cavalry on the hostile flanks was a principal cause of the rapid seizure of the line of operations up to Kassassin. The memorable night charge of the

<sup>1</sup> Wilson, p. 27.

<sup>2</sup> Goodrich, p. 95.

<sup>3</sup> Egyptian Official, p. 89.

<sup>4</sup> Afghan Official, '78-80, Sec. IV, p. 39.

Household Cavalry overwhelmed Arabi's infantry and artillery, scattering them like chaff. The brilliant charge at the action of Futtehabad swept through and through the large bodies of Afghans, and drove them in disorder from the field.

The dismounted action of cavalry against good infantry, or when the enemy has cavalry capable of effective manœuvres, is in European warfare employed merely as a temporary expedient. Our operations in Zululand in Afghanistan and elsewhere afford, on the other hand, frequent instances of the employment of cavalry dismounted with signal success. The fire of a few of the irregular horse was most valuable in drawing the Zulu attack on Kambula.<sup>1</sup> Near the Shutargardan Pass a party of cavalry coming unexpectedly on the enemy in broken and hilly ground, ousted them from their position by the attack of a portion of their number dismounted.<sup>2</sup>

The second battle of Kassassin was ushered in with a brilliant little cavalry episode. Fifty of the Bengal Lancers, finding the Egyptians advancing in force, some of them dismounted behind a ridge and opened an effective fire, then remounting they charged five hostile squadrons, inflicting great loss.<sup>3</sup> At Tamai, while the remnants of the broken square were keeping the Arab swarms at bay, a squadron of cavalry was rapidly brought up so as to take the enemy in flank, and by its dismounted fire greatly assisted the hard-pressed infantry.<sup>4</sup> When, in fact, a charge of hostile cavalry is not to be expected, this dismounted action is very valuable, and it is this circumstance—a circumstance peculiar to irregular warfare—that has brought mounted infantry into prominence of late years.

The Boers are the *beau-idéal* of mounted infantry. Inured to hardship and privations, mounted on active and admirably trained ponies, well armed and thoroughly skilled in the use of their weapons, these hardy farmers are to infantry a formidable foe. A few squadrons of cavalry would have given a very altered aspect to the short and disastrous campaign of 1881. It is much to be regretted that a practical illustration of cavalry against mounted infantry was not afforded during the Boer War, for we cannot but think that the result would have been to sensibly depreciate the value of these latter in the eyes of those who believe in the dragoon proper as against the lancer and hussar. The adroit manœuvre by which the Boers rode down from all sides and caught the British as it were in a trap near the Ingogo, would have been impracticable in the face of a couple of squadrons of British cavalry. The Boers will often leave their ponies grazing under cover when they move to the attack, and these would form an easy prey to a few troopers boldly handled.

Mounted riflemen did excellent service against the Zulus and in Egypt, and the experience of these campaigns shows that in irregular warfare when no hostile horsemen are to be feared, such corps are

<sup>1</sup> Zulu Official, p. 80.

<sup>2</sup> Afghan Official, '79-80, Sec. I, p. 33.

<sup>3</sup> Goodrich, p. 142.

<sup>4</sup> "Cavalry in Modern War," Trench, p. 191.

most useful, and may even replace cavalry at times: but the spurious importance attached in certain quarters to this mongrel arm is much to be deprecated.

For a charge to be effective against savages it must be delivered in compact formation. Adversaries such as these, fight, each man independently, and such dispersion as may be caused by galloping through them, is to them of no tactical moment. The brilliant charges at El Teb on difficult ground that necessitated opening out between the files were singularly barren of result. The charges in the Chardeh Valley over an intersected and unfavourable terrain proved of no avail. The effect in such cases depends on the number of the enemy actually put *hors de combat* and not on the confusion caused in the hostile ranks. The agile savage will dodge the horses if these come on in open order, and hamstring them as they pass, but a charge where the troopers ride knee to knee cannot be avoided in this fashion, and its effect increases tenfold.

Austria and Russia have discarded the lance as a weapon. The comparative merits of lance and sabre in regular warfare form a disputed question. The necessity of employing lancers in an army that is constantly engaged with savages and with adversaries possessing no cavalry worthy of the name has been, however, placed beyond doubt by the campaigns under consideration. The cavalry action on the Siah Sing heights and the pursuit after Ulundi demonstrate the value of the lance. At Hasheen the superiority of this weapon over the sword was well illustrated; the Bengal Cavalry, armed mostly with the sabre, fell into an ambush in unfavourable ground, and were forced to beat a speedy retreat; this was, however, effectually covered by a timely flank charge of lancers which caused great havoc among the pursuing Arabs.<sup>1</sup> At El Teb the cavalry was armed with the sword—one reason for the slight loss inflicted upon the enemy. By throwing themselves down the Soudanese escaped the point of the sabre but not of the lance. "In charges in line the lance is very useful, in *mêlées* the sabre is much better." This remark of Jomini's goes to the root of the matter, for in irregular warfare the cavalry sweeps through the hostile array, its shock is never arrested, and *mêlées* are exceptional. After the experiences of El Teb some of the cavalry were armed with hostile spears.<sup>2</sup> That the sword is by no means innocuous even if less useful than the lance was shown in the brilliant cavalry affair at Kushk-i-Nakhud, where the enemy left 163 killed, principally by the sabres of two squadrons of native cavalry;<sup>3</sup> but the weight of evidence adduced from these wars appears to favour the lance. It is worthy of note that in the pursuit after Kambula many of the irregular horse armed themselves with assegais, and used them most effectively as lances.<sup>4</sup>

The bold ride of the cavalry division to Cairo saved the city from

<sup>1</sup> "Suakin," pp. 147, 148.

<sup>2</sup> Burleigh, p. 71.

<sup>3</sup> Afghan Official, '78-79, Sec. III, p. 51.

<sup>4</sup> "In Zululand with the British," N. Newman, p. 165.

destruction, and by its intrepidity terrified the still formidable garrison into an ignominious surrender. The distance covered in less than twelve hours was over 35 miles of heavy ground.<sup>1</sup> This shows the value of cavalry in such wars when circumstances call for a bold stroke rapidly delivered. The loss as regards horseflesh was trifling in Egypt;<sup>2</sup> during the extensive cavalry operations that followed the victory at Charasiah, on the other hand, where the country all round Kabul was scoured for miles, several horses died of privation and fatigue.<sup>3</sup> During the Boer War a cavalry reconnaissance penetrated far into the Transvaal, over 70 miles being covered between dawn and sundown; the horses were much exhausted, but soon recovered.<sup>4</sup> These examples serve to show how independently cavalry can act in irregular warfare, but that it is apt to temporarily lose its efficiency, a fact that must not be left out of calculation.

Maiwand furnishes a valuable example of the danger of leaving cavalry exposed to artillery fire for any length of time. While the infantry lying down suffered little loss, the concentrated cannonade committed great havoc among the sowars, 27 per cent. of the horses and 14 per cent. of the men were placed *hors de combat* before the Ghazi onslaught broke up the line, and this so demoralized the remainder that their charges were delivered in a half-hearted manner and proved ineffectual.<sup>5</sup> In this case the cavalry could not be withdrawn out of range of Ayoub Khan's guns, as it was necessary to demonstrate continuously against swarms of Afghan horsemen threatening the rear.

*Artillery Tactics.*—Except in Egypt, artillery tactics have generally been on a small scale. They nevertheless present much that is interesting and instructive.

The massing of guns that has of late years become so prominent a feature in the tactical employment of this arm, is the outcome of conditions foreign to irregular warfare. A concentration of artillery under the control of one will, silences the hostile guns, battery after battery, and can then bring its cross-fire of shells to bear on the point selected for attack. Except at Tel-el-Mahuta and at Maiwand the artillery has in the many engagements of these campaigns been short, sharp, and decisive. A few rounds per gun have generally sufficed to drive the enemy from their pieces, and to enable our artillery to give undivided attention to the hostile infantry. At the second action of Kassassin where the Egyptians deployed a strong force of artillery, this appears to have been well handled; their guns made good practice, but their shells and fuzes were indifferent, and their batteries, except at first, made no attempt to bring a concentrated fire to bear.<sup>6</sup> This same independence is also observable in the action of our batteries, and although these as a rule soon obtained a mastery over

<sup>1</sup> "Staff Duties," Clarke, p. 81.

<sup>2</sup> Goodrich, p. 224.

<sup>3</sup> Afghan Official, '79-80, Sec. I, pp. 33, 39.

<sup>4</sup> "Recent British Battles," Grant, p. 359.

<sup>5</sup> Afghan Official, '79-80, Sec. V, p. 42.

<sup>6</sup> Goodrich, p. 217.

the hostile artillery and infantry, more decisive results might have been obtained had they acted more in concert. On the battle-grounds of Afghanistan, of South Africa, and of the Soudan, the *raison d'être* for massing guns generally disappears. When the enemy possesses artillery this can as a general rule be silenced with ease, and the subsequent action of the guns is rather to keep the hostile bodies occupied at other points than to pave the way for the infantry. At Kandahar, the batteries were purposely kept dispersed to distract the attention of the Afghans, and to enable the flank attack to partake of the character of a surprise. At Laing's Neck, artillery fire was directed on all points of the hostile position.<sup>1</sup>

Tel-el-Kebir affords a remarkable example of the massing of guns. The artillery appear in this action to have been intended as a pivot on which the infantry divisions on either flank might rely in case of reverse.<sup>2</sup> The concentration of the guns gave way to dispersion as soon as the infantry poured into the entrenchments, for the necessity of remaining thus massed had ceased to exist.

When acting on the defensive the advisability of massing guns is under any circumstances open to question. The object to be aimed at is rather the assurance of effective artillery fire on all roads that the assailant is likely to use in attack, than concentration for any particular object. Where, as has so frequently been our experiences of recent years, a rush may be expected at any moment or at any point, where the adversary appears on the field with great superiority as regards numbers, and where, as in Zululand, hostile tactics consist in an enveloping attack, guns must be dispersed. At Ulundi the guns were at the corners and in the centre of the sides of the square.<sup>3</sup> As the force advanced at El Teb, the guns were at the corners of the square.<sup>4</sup> At Maiwand great difficulty was experienced in replying to the hostile artillery, for this deployed on a wide semicircle round the British position, and thus brought a converging fire to bear.<sup>5</sup> Had Ayoub Khan massed his guns they would have formed a good mark for the British artillery, which was far superior in every respect except in number of pieces, and many would probably have been put out of action. The Afghan artillery tactics appear to have largely contributed to the severe defeat inflicted on General Burrows's force, and, when a small force is to be attacked by an army accompanied by a powerful train of guns, wide dispersion with a view of bringing cross-fire to bear appears preferable to concentration. At Ahmed Kehl the two batteries were at first drawn up near each other, but as the Ghazis streamed down from the hills, some of the guns were moved to assist the hard-pressed infantry, and by the end of the action the artillery was scattered along the line, and firing in different directions.

Artillery preparation has come to be regarded as the prologue to

<sup>1</sup> R.A.I., vol. xi, p. 650.

<sup>2</sup> See Egyptian Official, p. 78.

<sup>3</sup> Zulu Official, p. 115.

<sup>4</sup> Burleigh, p. 42.

<sup>5</sup> Afghan Official, '79-80, Sec. V, p. 42.

every engagement. Its moral effect is undoubted. In operations against savages, against opponents of very inferior *morale*, and against warriors who can put no guns in the field, this moral effect is especially marked, and, when such enemies are found strongly posted with the evident intention of accepting battle, preparation for the attack by a well-regulated artillery fire is most desirable. But when, on the other hand, the foe is seen to be wavering, and is merely waiting for an adequate excuse to quit his ground, the bursting of the first few shells becomes the signal for his precipitate retreat, and the chances of an action, always in these wars so difficult to ensure, are gone. "When you meet an Asiatic," says Sir F. Roberts, "go for him." This maxim, which is of general application to irregular warfare such as our troops are so often engaged in, cannot be too much taken to heart. In the hill fighting in Afghanistan opportunities of chastising the troublesome tribesmen were lost again and again by the too early display of artillery. "A few well-directed shells soon dispersed the enemy,"—such was the termination of the skirmishes that were of almost daily occurrence. A termination that was thoroughly unsatisfactory, for it afforded no guarantee against further annoyance. Infantry can alone deal effectually with such hostile gatherings: more drastic measures than mere moral effects are needed. At Kirbekan no guns accompanied the attacking columns. There was no artillery preparation before the storming of Tel-el-Kebir.

Artillery preparation has, however, proved most valuable in actions where the enemy showed a bold front. The concentrated shell-fire on the road into Magdala dissipated all hope of resistance in the defenders of the hill fortress.<sup>1</sup> At the action of Urzoo, near Ghuzni, the prolonged artillery preparation demoralized the defenders, and they made little stand when the infantry moved forward.<sup>2</sup> At Laing's Neck the guns were hardly allowed sufficient time to prepare the way for attack, but, although the ground was unfavourable, the Boers were much impressed with the effects of shell fire. When a surprise is contemplated, artillery preparation is out of the question. The disastrous sortie from Kandahar affords an example of the worst possible employment of guns. The short bombardment of Del Khojeh gave the Afghans ample warning of the impending assault, while its duration was insufficient to inflict injury on the defenders of the village.<sup>3</sup>

Mud villages in Afghanistan were found to very effectually resist the shells of our guns; age toughens the walls till they resemble concrete, but does not render them sufficiently brittle to splinter. The tiny rooms that are their leading characteristic absorb the explosion of projectiles, and cramp their effect. The prolonged bombardment of the villages near Urzoo inflicted insignificant losses on the Afghans at a great expenditure of ammunition.<sup>4</sup> The trifling results obtained from the artillery against Giniss were much noticed.<sup>4</sup> The attack and

<sup>1</sup> Hozier, pp. 234, 235.

<sup>2</sup> Afghan Official, '79-80, Sec. III, p. 41.

<sup>3</sup> *Ibid.*, '79-80, Sec. V, pp. 53, 54.

<sup>4</sup> "Times" correspondent.

defence of mud villages must ever be a feature in Indian operations, and this fact would seem to demand the substitution of guns of greater weight of metal for the 9-pr. with which the artillery of our great Asiatic dependency has now to rest satisfied.

The moral effect of guns in these campaigns has been already commented on. But against sudden rushes of savages the effect of artillery fire is more than moral. The shells inflicted tremendous losses on the Zulus at Ulundi. At Ahmed Kehl and Tamai guns held their ground against the most determined onslaughts of fanatical and desperato foes. A salvo of case shot at Abu Klea did great execution as the Arabs swarmed down on the square.<sup>1</sup> The well-directed shells from the zarba materially assisted the square as it moved from Abu Klea to the Nile.<sup>2</sup> At Hasheen a few rounds checked a determined attempt to close in on the rear of the British force.<sup>3</sup> At Kirbekan two guns did excellent service in containing the enemy while the wide turning movement was being carried out. At the Ingogo the determined resistance of the artillery under most unfavourable circumstances, aided materially in keeping the Boers at bay.<sup>4</sup> In the stockado fighting in the Naga Hills,<sup>5</sup> in Bhootan and in Lushai the guns, carried generally by coolies, have been constantly pushed forward into front line within close range of the hostile works. A serious encumbrance to a force beset with difficulties such as our armies are generally exposed to in these wars, the guns have at the moment of collision never failed to prove themselves worthy of the trouble caused by their transport and their escort.

It is not a little singular that at Kassassin on one of the only occasions on which in these campaigns gun-pits have been employed, they afforded such a target to the hostile artillery that the guns were advanced into the open.<sup>6</sup> This lesson is useful as showing the evils of pits or, indeed, entrenchments of any sort where their character or the nature of the surroundings forms them into a mark for the projectiles of the enemy.

In Afghanistan the mountain batteries were ubiquitous and proved of more general utility than horse and field artillery. In all the hill campaigns on the Indian frontier the employment of portable guns as against draught artillery has come into prominence. In the Naga Hills the light 7-prs. were carried by coolies. The same system was applied in Ashanti. On the sands of Egypt the Indian screw guns rivalled the horsed guns in mobility.<sup>7</sup> At El Teb and Tamai, as during the march on Metemneh, guns carried on camels proved most serviceable. In Zululand, on the other hand, where field artillery was principally used, the guns were of necessity kept close to the infantry, and the rapid movement which horse draught

<sup>1</sup> R.A.I., vol. xiii, p. 376.

<sup>2</sup> Wilson, p. 70.

<sup>3</sup> "Suakin," pp. 148, 149.

<sup>4</sup> R.A.I., Vol. xi, pp. 683, 684.

<sup>5</sup> *Ibid.*, Vol. xi, pp. 265, 266.

<sup>6</sup> Goodrich, p. 246.

<sup>7</sup> *Ibid.*, p. 248.

renders possible was seldom turned to account. The decision of General Roberts—himself a gunner—to take only mule batteries on the march to Kandahar over ground that offered no difficulties to wheeled transport is worthy of note. One important lesson then to be learnt from these wars is that for such operations portable artillery appears certainly better adapted than the draught artillery of Continental warfare. It is to be regretted that no organized batteries exist for home and colonial service, for when hostilities break out, these have to be improvised in haste, or else mountain artillery from India must be requisitioned.

*Machine-guns.*—Machine-guns have played a not unimportant part in certain actions of these campaigns. At Ginghilovo the Gatling did great execution among the Zulus; at Ulundi the guns jammed after firing a large number of rounds. Opposed to enemies who charge in great swarms, these weapons are of undoubted value, but as yet the mechanism of the various patterns put forward by inventors has not proved trustworthy in action. At Abu Klea the Gardner gun jammed with most unfortunate results; the same occurred at McNeil's zereba. Any mitrailleuse that involves wheeled conveyance appears objectionable; such a weapon carries with it the unwieldiness and dependence on other arms that are characteristic of artillery, while possessing neither its destructive effect nor its range. A battery of Gardner guns was formed at Suakin in 1885 on the lines of a field battery, although the men were not mounted; it proved useful at Hasheen, silencing the Arab fire from clumps of undergrowth near the square, but there is nothing to show that case shot from 7-prs. would not have been to the full as effective, while these would have been no more of an encumbrance to the force, and would have been of far greater value at long ranges.<sup>1</sup> At Tamai the Gatlings and the Gardner's of the Naval Brigade fell for a while into the hands of the enemy, and in the struggle round the guns the bluejackets lost severely. The Arabs at first charged the guns in front, but were checked by their fire; they then attacked them in flank and captured them.<sup>2</sup> The infantry having given way, the guns were left unsupported and were unable to defend themselves. Their want of mobility prevented their being withdrawn, and the result was disaster. Experiences in the Soudan cannot be said to show machine-guns in a favourable light. In each of the three actions against the Arabs where matters momentarily assumed a critical aspect, the weapon from some cause or other proved a failure.

If those interested in the question of machine-guns would endeavour to create a form of the weapon that could with ease be carried by two men or on a horse, that could be relied upon not to collapse from mechanical defects at a moment of crisis, that could act as an auxiliary to infantry and cavalry under all circumstances without being a burden, their efforts might produce a mitrailleuse capable of moulding the tactics of the future as the breech-loader has moulded the tactics of the present. In its existing forms it has no

<sup>1</sup> See "Machine-gun Battery." Lieutenant Benson, R.A., R.U.S.I., vol. xxx.

<sup>2</sup> Burleigh, pp. 230, 231.

definite function on the field of battle. On the experience of our recent campaigns it stands emphatically condemned.

*Some Characteristic Features of Irregular Warfare.*—A very remarkable feature in the tactics of those campaigns that have been carried on against Asiatics and savages, is the rapidity of movement of our opponents. This mobility, coupled with the dexterity such warriors display in concealing themselves in thickets and folds of the ground, has been a fertile source of conditions at the commencement of an action that nearly resemble surprise. The rate of advance of the huge Zulu armies was almost phenomenal. In the affair of the Inhlobane Mountain an immense force from Ulundi was descried several miles off, but approached at great speed, and would have annihilated the small British force had it joined in the fight.<sup>1</sup> In every battle of the Zulu war the savage onslaught resembled rather a charge of horsemen than an infantry attack. The Arabs proved in the Soudan as nimble footed as did the Zulus in South Africa. At Hasbeen a squadron of Bengal cavalry retreating through the bush found itself outpaced by these sinewy footmen, and suffered loss in consequence.<sup>2</sup> At Abu Klea the Arabs almost overtook the skirmishers as these ran back to the square.<sup>3</sup> At Ahmed Kehl the Afghans swarmed down from the hills with such rapidity that the troops had to be formed up in hot haste, and the situation was for a moment not without danger. The British force in fact fell into a skilfully prepared ambush. Preparations were being made to attack the hostile position athwart the road leading to Ghuzni, when suddenly masses of men appeared on the left, and their onslaught forced our troops to act on the defensive and to form front to a flank.<sup>4</sup> At Tamai the Arabs lay concealed in a gully. At McNeil's zareba they crept up stealthily on all sides, there were no words of command and no confusion, the enemy appeared to spring out of the earth as if by magic, and nothing but the steadiness and resolution of the soldiers saved our arms from disaster. The lessons to be learnt from these campaigns all point to the fact that in spite of organization and instruction, in spite of superior intelligence and knowledge of the art of war, our troops are constantly on the verge of being surprised. The muscular activity of savages aids them alike in advance and in concealment. The experiences of these campaigns appear to point in fact rather to the necessity for being ever prepared in case of surprise, than to the possibility of avoiding surprise altogether. A large force of cavalry should in favourable ground secure its comrades against being attacked unawares, but when the nature of the country is favourable to ambushes, and when cavalry are few, surprises are to be expected, and must be provided for.

It should be noted that in the Soudan the mirage renders scouting duties very perplexing to Europeans; the glare of the tropical sun obstructs vision, and adds to the difficulty of detecting moving objects.

<sup>1</sup> Zulu Official, pp. 76, 77.

<sup>2</sup> "Suakin," p. 146.

<sup>3</sup> Wilson, p. 27.

<sup>4</sup> Afghan Official, '79-80, Sec. IV, p. 39.

In his carefully compiled and impartial "Report of the British Naval and Military Operations in Egypt," Commander Goodrich, United States' Navy, writes of the opening of the second battle of Kassassin: "There appears to be little doubt that the British came near being surprised."<sup>1</sup> The advance of the Egyptian Army was discovered soon after dawn by a reconnaissance sent forward from the outposts. This illustrates the tendency, even among those well qualified to give an opinion on military questions, of describing any action on the part of the enemy that is unexpected as a "surprise." Information of the impending attack reached the camp in ample time to allow of the necessary steps being taken.

*Configuration of Ground.*—The influence exerted on tactics by the configuration of ground has been frequently and instructively demonstrated in our small wars. The lessons to be deduced from the Rotherberg at Spiecheren, and the vine-clad declivities above Floing at Sedan, have been brought home to us at the Ingogo and on Majuba Hill. That rounded conformation of ground that is so characteristic of our chalk downs existed at Laing's Neck.<sup>2</sup> The horseshoe position seized by the Boers possessed certain elements of strength at all points, while portions of it were almost unassailable. The varying curve of the slopes, gentle at the summit and steepest at the foot, would have given rise to much dead ground but for a spur on the left which flanked the declivity. Our infantry scrambled up to within a few paces of the Boer position, sheltered from frontal fire, but were enfiladed and taken almost in reverse from this spur, the attack on which had miscarried. The position possessed great command, while in the rear the ground fell rapidly, and artillery fire was thus at a great disadvantage. The low round hill occupied by the British force near the Ingogo might be taken as a typical example of a thoroughly dangerous position. In itself a mere undulation in the ground, the lower slopes of the flat-topped eminence fell rapidly, and thus afforded shelter to the Boers, while the defenders were on the sky line; a fringe of rocks—the outcrop of a lower stratum—encircled the whole at the level where the slope commenced to steepen, and this afforded admirable cover to the hostile shooting line.

Steep and broken ground in the immediate neighbourhood of a position must ever be a source of danger. The terraced sides of Majuba Hill permitted the Boers to creep up unseen. The position at Kambula was on a ridge running east and west; to the north the ground descended in a glacial slope, but to the south "abrupt hedges afforded a considerable amount of cover, and left a large area comparatively close at hand unseen by the defenders."<sup>3</sup> The Zulu attack on the north side came to a standstill at some distance from the laager, but to the south they succeeded in collecting in the dead ground, and maintained themselves in close proximity to the British position for a considerable time; and from here they advanced again and again to the assault. Command carries with it

<sup>1</sup> Goodrich, p. 142.

<sup>2</sup> Description of terrain from personal observation.—C. E. C.

<sup>3</sup> Zulu Official, p. 79.

certain advantages, but these in no way compensate for a contracted field of fire. Majuba Hill and the Inhlobane Mountain, moreover, show how difficult it is to effect a retreat from such high ground.

That the assault of steep and broken ground is less difficult of execution in reality than it is in appearance, has been proved again and again in these campaigns. The assault of the Peiwar Kotal, the storming of the Afghan positions at Charasiah, the capture of Sekukuni's stronghold, the attack on the Arabs at Kirbegan, and the successful crowning of the hill above Hasheen, show that good troops will scale steep and rocky slopes in face of opposition, and will do so with trifling loss. The moral effect of the uncertainty that prevails on the summit as to the number of the assailants, the exposure of the defenders on the sky line, solicitude as to the line of retreat, these are the causes that render such elevated positions dangerous. Ground that is difficult of access is in fact often the most favourable for attack.

*Variety in the Tactics of our Different Adversaries.*—Nothing is more singular in these wars than the difference between the various adversaries against whom we find ourselves pitted, as regards tactical skill and discipline. In Ashanti our antagonists appreciated the value of flank attacks,<sup>1</sup> and displayed considerable generalship, but the leaders possessed little control over their followers. The Zulu tactics were simple but judicious; the discipline that prevailed in their huge armies was remarkable. The Afghan leaders showed little tactical skill; they appear never to have contemplated flank attacks. At Ahmed Kehl an opportunity of breaking in between the separated portions of the British column was not taken advantage of; at Maiwand considerable dexterity was shown in deployment, but no attempt was made to cut the British from Kandahar. At Kabul, on the other hand, generalship of the highest order was displayed by Mohammed Jan when on the 14th December he threatened the left of the British force which was forming front to a flank, its right resting on Sherepore, while developing an attack in great strength on Roberts's "tactical" flank.<sup>2</sup> Although standing considerably higher in the human scale than Zulus or Soudanese, the Afghans were far less under the control of their chiefs.<sup>3</sup> The qualities displayed by our antagonists are not in the abstract of great military interest, but the difference between their characteristics shows how important it is to study the methods of war of the people against whom a campaign is imminent. Zulu tactics differed totally from those of the Kafirs and Basutos, but this fact was not fully recognized till disaster had placed it beyond doubt. The followers of the Mahdi were not appreciated at their true value till the annihilation of Hicks Pasha's army and the disaster to Baker's Egyptians showed to the world the formidable nature of the Soudan revolt.

*Flank Attacks.*—The want of foresight shown by Afghan leaders as to the safety of their flanks has been remarked upon. In European warfare a Commander is ever on the look-out for turning movements,

<sup>1</sup> Brackenbury, vol. i, p. 363.

<sup>2</sup> Afghan Official, '79-80, Sec. II, pp. 13, 14.

<sup>3</sup> See as to Soudanese, Wilson, pp. 26, 27.

and devotes much attention to the security of his own flanks. In Afghanistan this appears not to have been the case, and on this account the principal actions of the campaign involved wide turning movements which in all cases proved successful. The decisive victories at Charasiah, at the Peiwar Kotal, and at Kandahar were brought about by the manœuvre, so frequently successful in military history, of containing an enemy by a show of force in front, while the real attack is aimed against the flank. The struggles that took place along the Fresh Water Canal in Egypt were generally marked by attempted turning movements by one side or the other. The line of operations up to Kassassin was wrested from the enemy by the constant pressure of cavalry and artillery against his flanks. The tables were turned by the Egyptians in their first attack on Kassassin, for here they worked round General Graham's right; but this movement was thrown into the utmost confusion by the cavalry attack, which in its turn swept round the hostile left, thus outflanking and taking in reverse the troops engaged in the turning movement.<sup>1</sup>

The Boers at Laing's Neck fortified the projecting spur that marked their left: but on the right, where the ridge rising gradually to the foot of the Majuba Hill, offered in its rugged slopes certain facilities for attack, no entrenchments were constructed. They appear never to have contemplated an attack on this side. At El Teb the square moved along the front of the position prepared by Osman Digma's followers, and wheeling on to its left flank robbed the defenders of the advantages arising from their works.<sup>2</sup> The manœuvre not a little resembled the processional tactics of the Great Frederick. At Kirbekan the attacking infantry swept round the left of the ridges occupied by the Arabs and attacked them in rear.<sup>3</sup> This action is further remarkable as showing the small containing force required on such occasions; two guns and two companies sufficed for the purpose.

Our experiences in these wars in fact point generally to the advisability of flank attacks. Our adversaries seem seldom prepared for such manœuvres, which is the more remarkable, as when acting on the offensive they appear individually to realize the advantages of turning movements. The Ashantis invariably threatened the flanks of our columns when engaged. Modern tactics demand flank attacks owing to the terrible losses resulting from the frontal fire from a position, in irregular warfare they are desirable as taking the enemy at a disadvantage, owing to his being unprepared for them.

*Defence.*—Tacticians abhor an attitude of passive defence, and insist that when a force takes up a position with the view of their standing to receive attack, the possibility of counter-attack must always be kept in view. To permit an assailant whose efforts have failed, to withdraw unmolested, is to lose a great opportunity of inflicting loss. But under the circumstances in which our troops have so often of late years withstood the desperate onslaughts of savage masses, counter-attack appears out of place. "The passage from the

<sup>1</sup> Goodrich, pp. 132 to 136.

<sup>2</sup> See Burleigh, Chap. VII.

<sup>3</sup> "River Column," p. 143.

defensive to the offensive," says Napoleon, "is one of the most delicate operations of war." The abandonment of the defensive attitude necessitated by the square formation at Tamai, was one cause of the scrimmage that ensued. At Abu Klea the tendency of cavalry soldiers to attack appears to have contributed to the confusion that gave rise to the gap in the square.<sup>1</sup> The actions in which our troops are attacked suddenly by very superior numbers are generally a matter of moments, there is little time and little opportunity for counter-attacks, and an attitude of passive defence is probably best calculated to break the shock of the hostile rush. A counter-attack at Kambula directed against the Zulus who had occupied dead ground close to the laager, drove off the enemy, but, coming under a heavy flanking fire was of necessity withdrawn, its retreat encouraging the enemy to fresh exertions.<sup>2</sup> To remain, however, passive in an untenable position is the worst possible policy. At Maiwand no effort was made from the exposed position taken up by the British force to check the Afghan deployment. A bayonet charge at the critical moment might have averted the disaster on Majuba Hill. The best troops get demoralized and lose confidence when kept inactive under heavy fire, and under such circumstances a judicious counter-attack will restore confidence.

At Tel-el-Kebir some Nubian troops delivered a timely and effective counter-attack on the Highland Light Infantry as they scrambled over the parapet at a point where its profile was of a formidable character, driving the assailants back out of the works.<sup>3</sup> The stroke was successful as aimed by formed against unformed troops. The moment when the regiment was disordered by the escalade was adroitly seized, and the incident affords one of the most interesting examples of counter-attack to be found in these campaigns. The counter-stroke attempted by the Arabs just as the assault was to be delivered at Kirbegan, miscarried, for the opportunity was ill-chosen.<sup>4</sup> At the battle of Kandahar, after the orchards round the village of Gandigan had been charged at the point of the bayonet, a counter-attack by large masses of Ghazis caused a momentary check, but recoiled before the firm front of the victorious troops.<sup>5</sup> Our opponents do not seem to recognize that for offensive returns to be effectual they must be delivered at a moment of confusion, or when the assailants show signs of wavering. At El Teb Arabs rushed against the advancing lines by two and threes; no organized counter-strokes were undertaken.<sup>6</sup>

*Feigned Retreats to draw on the Enemy.*—The records of our struggles for supremacy in India have shown how feasible it is to draw adversaries wanting in discipline, and whose leaders fail to readily grasp tactical situations, into premature attack by feigned

<sup>1</sup> Wilson, p. 33.

<sup>2</sup> Zulu Official, pp. 80, 81.

<sup>3</sup> Egyptian Official, p. 91.

<sup>4</sup> "River Column," p. 160.

<sup>5</sup> Afghan Official, '79-80, Sec. V, pp. 78, 79.

<sup>6</sup> Burleigh, pp. 49, 50.

retreats. On more than one occasion a foe has by this simple stratagem been allured out of a strong position, and been thus induced to forego the advantages of prepared and favourable ground. The slightest backward movement leads at once, in these campaigns to a corresponding advance on the part of the enemy. Our troops had scarcely quitted the summit of the hill above Hasheen when it was crowned again by the defiant Arabs.<sup>1</sup> When during the sortie from Kandahar a withdrawal from Deh Khojeh became imperatively necessary, the Afghans at once poured into the village from all sides, and went near converting the retreat into a rout.<sup>2</sup> A retrograde movement in the face of such opponents is a most hazardous operation owing to the eagerness they invariably display in pursuit. This characteristic readiness to at once fall upon a foe who turns his back can often be turned to account. Artillery and cavalry at Futtehabad drew a formidable gathering of Shinwarris out of a strong position, turning on them when the infantry came up and driving them from the field with slaughter. Buller's irregulars at Kambula enticed the Zulus into making a premature attack with the right wing of their army which brought this within close range of the laager, where the rifles of the infantry had a clear field of fire.<sup>3</sup> At Quintana in the Transkei the Kaffirs were skilfully drawn into an ambush. The Light Horse moved out with a company of infantry, but retired as the enemy advanced, and drew them on to the British post, where they were received with a heavy fire of artillery rockets and of musketry from shelter trenches. The result was a complete success at trifling sacrifice.<sup>4</sup> During the reconnaissance in force the day previous to the battle of Kandahar, cavalry pushed up close to the Afghan position; these no sooner retired than the enemy swarmed down in pursuit and necessitated a large portion of the Kabul division being ordered under arms.<sup>5</sup> The required information was obtained, and the setting in of darkness put an end to the engagement, but the incident serves to show how easily adversaries of this character can be allured out of the ground they have chosen.

It is singular that this simple ruse of a pretended retreat has been so seldom employed in these campaigns. At Hasheen the Arabs appear to have deliberately drawn on the British force while gathering on their flanks and rear to pounce down on their transport,<sup>6</sup> but on no occasion was the same manœuvre attempted against them. The square formation would most readily adapt itself to the stratagem owing to the perfect control exercised over the whole by its commander, and to the essentially defensive character of its tactical function. At Tamai a halt, as if in hesitation, within short distance of the gully where the Arabs were known to be gathering, might have tempted the enemy to discover his forces. A movement to the

<sup>1</sup> "Suakin," p. 151.

<sup>2</sup> Afghan Official, '79-80, Sec. V, p. 51.

<sup>3</sup> Zulu Official, p. 80.

<sup>4</sup> "My Command in South Africa," Cunningham, p. 372.

<sup>5</sup> Afghan Official, '79-80, Sec. V, p. 77.

<sup>6</sup> "Suakin," pp. 159, 160.

right-about could have hardly failed to provoke an onslaught on the square, under circumstances very different from the disordered formation in which it was actually met by the hostile rush. As the square marched from the zaraba to fight its way through to the Nile on the day of Abu Kru, it proved an easy mark for the sharpshooters concealed among the patches of grass and scrub, whose irritating fire gave cause for grave uneasiness; no sooner, however, did the hostile spearmen deliver their charge than the danger passed away, and the march to the water's edge was continued unmolested. A feigned retreat towards the zaraba might have precipitated the Arab assault, and have thus hastened the crisis.

*Villages and Woods.*—The attack and defence of villages and woods plays an important part in Continental warfare. The mud villages of Afghanistan surrounded as a rule with lofty crenelated walls gave rise to frequent and stubborn contests: the dense undergrowth in Ashanti gave signal illustration of the inevitable confusion and misconceptions to which troops engaged in woods are prone. The principal disadvantages under which trained soldiers labour in the defence of villages and woods, namely, the dispersion of units and lack of supervision that necessarily follow, disappear in the case of warriors who fight each man for himself. This fact rendered the Afghans very formidable in the defence of their villages, and tended in the impenetrable jungle of Ashanti, as also near Suakin, to bring the opposing forces on an equality.

That the bombardment of mud villages by field artillery is of little avail has been already pointed out. The attack on Del Khoja from Kandahar was at first successful; for a footing—as a rule the principal difficulty—was at once gained in the outskirts of the village.<sup>1</sup> The enemy, however, being able to bring reinforcements to the spot, the endeavour to keep what had been won only resulted in our suffering far greater losses than had the attack failed at the outset. This is instructive as showing that what in struggles between civilized troops proves the great stumbling-block to the assault of a village—crossing the open ground in its neighbourhood—proves at times the least part of the difficulty when the defenders have but flint-locks to rely on. For after the capture of an Afghan village, groups remained concealed in nooks and corners ready to pounce down on the unwary. After the village of Gundi had been carried at the point of the bayonet during the battle of Kandahar, and the assailants had pushed on, several companies of Goorkhas were left to clear out the Afghans from their hiding-places.<sup>2</sup> Many hours after our troops had forced their way into Gimiss and organized resistance was at an end, Arabs were still found in some of the houses ready to fight till the last. Asiatics and savages who revel in bloodshed, and who fight with the ferocity and cunning of wild beasts, are very formidable in such contests, from the losses they may cause even after the village has been for all practical purposes secured. That mud villages are capable of obstinate and protracted

<sup>1</sup> Afghan Official, '79-80, Sec. V, p. 54.

<sup>2</sup> "Afghan War," Hensman, pp. 514, 515.

defence was frequently shown in Afghanistan. Metemneh proved too formidable for the force at Gubat to attack. The Ashanti villages would have admitted of obstinate defence, but our adversaries preferred the harassing tactics of jungle fighting to shutting themselves up in their hamlets. They offered but a mild resistance in Amoaful and Ordahsu, while no opposition was attempted by the crowds of armed men in Coomassie as the expeditionary force marched into the town and formed up in the market-place. At Becqual the enemy contested the entrance into the town with some vigour, but withdrew hastily when their outer line was forced.<sup>1</sup>

The varied experiences of these campaigns show that the mud villages so familiar to the Anglo-Indian are capable of conversion into defensive posts of great strength, and that the Afghans appreciate their value to the full; in the Soudan also good use has been made of such localities. The art of fortifying hastily the hamlets and enclosures that form so characteristic a feature in every Eastern theatre of war is deserving of a study accorded at present only to the type of village met with on Continental battlefields.

The Afghan, Abyssinian, and Boer campaigns, as also the Egyptian War, furnish no examples of wood fighting, but for this the struggle in Ashanti more than compensates. The theatre of operations beyond the Prah consisted for the most part of forest land, the feet of the gigantic trees draped in a dense undergrowth difficult of passage. Paths were hewn through the bush in the heat of action with sword-bayonets. The topographical character of the country was such as to illustrate in every engagement the difficulties and uncertainty that beset disciplined troops when fighting in woods and copses. The normal tactical formation of the Ashantis was a loose skirmishing order which permitted them to display their aptitude for concealment, and for rapid movement through thickets apparently impenetrable, to great advantage. "One point," wrote General Wolseley in his despatch after the first brush at Essaman, "stands forward prominently from the experience of this day—viz., that for fighting in the African bush a very exceptionally large proportion of Officers is required. Owing to the dense cover an Officer can only exercise control over the men close to him, and for this kind of work there should be at least one Officer to every twenty men."<sup>2</sup> With a view to decreasing the tactical unit as far as possible, orders were given for each company to be broken up into sections, each section to be permanent during the war as regards command and for administrative purposes.<sup>3</sup> In action three sections were extended, one remained in support, from 40 to 80 yards in rear. This sectional organization worked to perfection, and by its means the men were kept well in hand under circumstances of exceptional difficulty.<sup>4</sup> The Ashantis always endeavoured to envelop the numerically insignificant force opposed to them, hoping to demoralize it by threatening the lines of retreat.

<sup>1</sup> Brackenbury, vol. ii, p. 186.

<sup>2</sup> *Ibid.*, vol. i, p. 183.

<sup>3</sup> *Ibid.*, vol. i, pp. 362, 363.

<sup>4</sup> Sir A. Alison's Report on Amoaful, Brackenbury, vol. ii, p. 164.

The hostile pressure on the rear was ignored, but the troops finding themselves in the midst of a semicircle of fire without knowing whence it came, and seeing nothing but bush on all sides, it was often with great difficulty that different companies of the same regiment were prevented from firing into each other. The experiences of Amoaful and Ordahsu were the experiences of the Giferts forest and the Niederwald in an exaggerated form. At Amoaful the different commands lost all touch of each other. The total ignorance as to the position of neighbouring detachments rendered co-operation most perplexing. On one occasion at Ordahsu a whole company suddenly opened fire in all directions when there was absolutely nothing to fire at, misled by the sound of musketry that seemed close by.<sup>1</sup> Officers were directed to work by compass, and the success that crowned their efforts in keeping the rank and file under control, as also the steadiness and discipline of the men, reflected great credit on the force.

In such a country, and opposed to adversaries so capable of turning its characteristics to account, it is remarkable that the British force enjoyed almost complete immunity from surprises. At Iscabio, indeed, a most successful surprise was carried out on the Ashanti camp.<sup>2</sup>

The difference between the tactics employed among the dense tropical vegetation of Ashanti, and the rigid order of battle that obtained amid the thorny bush near Sunkin, is very marked. The Soudanese method of war forbade the loose skirmishing formations so successful on the march to Coomassie. But in one respect the experiences of the two campaigns fought under such different conditions coincided. The total ignorance as to the hostile movements that rendered the protracted struggles beyond the Prah so trying, was to the full as perplexing in the movements towards Hasheen and Toprek. To penetrate into a jungle infested with foes so daring and so numerous as the spearmen who gathered around the standards of Osman Digma, is to place the trained soldier of Europe in a most disadvantageous position. Although the square formation kept the Arab swarms at bay, the different faces were of necessity broken by patches of jungle, and the manœuvring of a solid body hampered by transport was in such a country a tedious and trying operation. It, nevertheless, effected its purpose of sheltering baggage animals, hospital equipment, and wounded. It was a thoroughly inconvenient formation, but the best that could be devised to meet circumstances so unfavourable. Strategic reasons must indeed be imperative to permit of an army being thrust into situations tactically so full of danger.

The lessons to be learnt from the bush fighting in Ashanti are in accord with the experiences of Continental warfare. They point to the difficulty of control, liability to panic, and necessity for small units that are characteristic of woodland operations, and they establish the certainty that the best troops will gain the victory. All that can be deduced from the hazardous operations in the thorny jungles around

<sup>1</sup> Brackenbury, vol. ii, p. 211.

<sup>2</sup> *Ibid.*, vol. i, p. 239.

Suakin points to the advisability of giving such dangerous hiding-places for a daring and resolute foe, a wide berth.

*Orders on the Battlefield.*—Bronsart von Schellendorf, in his valuable work on staff duties, appears to sanction the sending of verbal orders during an engagement. Circumstances may render this unavoidable, but an episode in the Egyptian War serves to show how necessary it is to commit orders of importance to writing. A message sent verbally through an Officer during the first action of Kassassin requesting co-operation on the part of the cavalry, was delivered in a form that made the case appear more urgent, and the situation more grave, than was actually the case. It was under a false impression that General Drury-Lowe undertook the movement that culminated in the night charge.<sup>1</sup>

*Night Operations.*—That actual night attacks should have played so unimportant a part in these campaigns is not a matter for surprise as regards our own troops, for the *raison d'être* of such enterprises is to escape the fire of the enemy, or else to fall upon an adversary unawares. The weapons of our antagonists are not sufficiently formidable, nor is the terrain as a rule of so favourable a character for surprise, as to tempt commanders to risk the confusion inseparable from such operations. But it is strange that night attacks on our troops should have been so seldom attempted where the darkness of necessity favoured warriors inferior in discipline and armament. The attack on Dewangniri during the Bhootan War, the attempted *coup de main* on Fort Battye by the Shinwarris, the continuation of the struggle round Rorke's Drift far into the night, and the surprise at dawn of day on the Intombe River are but the exceptions which prove the rule that our opponents in these small wars show a marked distaste for organized night attack. More than this. They seldom appear to contemplate night movements on the part of those operating against them—a matter of great importance as affecting night marches, and preparations for assailing their positions at daybreak.

From the struggles that have actually taken place by night there is not much to be learnt. The attack on Dewangniri was successful in so far as surprise is concerned, but neither side could effect anything in the darkness, and at dawn the Bhootas were driven off.<sup>2</sup> This tends to show the difficulties that attend such enterprises. The night attack on Morosi's Mountain is a remarkable example of an assault delivered in the middle of the night over most difficult ground. The only side practicable for the stormers had been carefully fortified, but fissures in the rocks enabled the defences to be avoided, and for the ascent scaling ladders were employed. The Kaffirs were surprised, and the bold enterprise resulted in a brilliant success.<sup>3</sup> The lurid glare of the burning hospital proved of great service to the defenders of Rorke's Drift, giving them light to use their rifles. The attack on Fort Battye was beaten off, but not without loss, and the garrison had a narrow escape. At Suakin the iron bands from the trusses of

<sup>1</sup> Goodrich, pp. 133 to 136, and Egyptian Official, pp. 65 to 67.

<sup>2</sup> "Story of the Bhootan War," Rennie, pp. 195, 196.

<sup>3</sup> "Recent British Battles," Grant, pp. 44 to 46.

hay were found to act as a simple and efficient safeguard against the harassing night attacks of marauders.

Assaults at break of day, for which the requisite arrangements have been made under cover of night, have on more than one occasion proved signally successful in our recent campaigns. The night march to Tel-el-Kebir completely surprised the Egyptians. Scarcely less remarkable in the decisive character of the results obtained, was the movement by which General Roberts brought his main column of attack on the Afghan flank the night previous to the assault of the Peiwar Kotal. The assault on the Arabs at Giniss took place soon after dawn, our preparations having been made during the darkness. Previous to the assault on Tel-el-Kebir, observation of the Egyptian works had shown that the hostile outposts and picquets only moved out to a distance from the entrenchments after daybreak,<sup>1</sup> and the general experience of these campaigns shows that at night our adversaries neglect outpost precautions.

The difficulties and dangers, however, inseparable from night marches, have been frequently illustrated of late years. Even at Tel-el-Kebir, where the movement proved so signally successful, its hazardous character was shown by the wheel inwards of the Highland Brigade owing to an order to halt reaching the companies in the centre, while the outer flanks remained in ignorance and pressed on.<sup>2</sup> The mistake was discovered betimes, but twenty-five minutes elapsed before the brigade could resume its march. The night march of two brigades over the hills to threaten Ali Musjid in rear was attended with such difficulties and delay that the troops could not participate in the action, although their arrival late in the afternoon caused the evacuation of the stronghold during the night.<sup>3</sup> The retreat from Dewangniri some days after the attempted *coup de main* of the Bhootas provides a vivid picture of the disorders that may attend a night march. The main column lost its way, the perils of the route through the hills produced a panic, some of the wounded were left behind in the confusion, the abandoned guns were pushed over the precipices in hope of saving them from capture, and the force arrived at its destination in a complete state of demoralization.<sup>4</sup> The ascent of the Majuba Hill by night was successful in surprising the Boers, but the troops were much exhausted from the effort. A forced march by the 6th Foot at the opening of the Hazara campaign deserves note. The distance traversed was 20 miles in the middle of the hot weather; the most elaborate precautions were taken as regards water and currents of air through the column, and it was hoped that by night the health of the regiment would not suffer. Six men, however, died of heat apoplexy, and many were temporarily incapacitated, thus showing that in the tropics night marches are little less trying than the effects of the sun. In Egypt, where nights are cool and the nature of the country favourable, there is much to be said in

<sup>1</sup> Goodrich, pp. 145, 150.

<sup>2</sup> Egyptian Official, pp. 87, 88.

<sup>3</sup> Afghan Official, '78-79, Sec. I, pp. 27, 28.

<sup>4</sup> "Story of the Bhootan War," Rennie, pp. 199, 200.

favour of avoiding the heat and glare of daylight, but even under such circumstances night marches seem suitable rather for a single effort, as before Tel-el-Kebir, and as in the case of the advance from Abu Klea to the Nile, than for sustained operations. The march from Abu Klea carried the British force many miles through a country infested with the followers of the Mahdi, and eminently suitable to their harassing tactics, in safety. Many camels were, however, lost with their precious loads; the formation of the force during the march into two columns, marching parallel with a view to greater compactness, caused serious confusion which was heightened by the obstacles in the shape of thorns and desert grass, a loud continuous roar rose up to the sky, proclaiming to the enemy that the British were on the move, and the attempt to reach the Nile without fighting proved abortive.<sup>1</sup> The perilous operations of the following day were the more trying, owing to the exhaustion that prevailed, but the actual distance to be traversed in face of the enemy was merely a fraction of what it must have been but for the night march. The escape of the small British force from the Ingogo battlefield after night had closed in, carrying off the guns, illustrates the want of vigilance displayed by our adversaries.<sup>2</sup> The Boers showed considerable tactical skill in bringing on the engagement, and in their movements during the fight, but, under the impression that the Ingogo was too swollen for troops to cross, they neglected to keep a sharp look-out, and thereby permitted the column to escape out of their toils.

A succession of night marches saps the efficiency of an army. Want of rest tells alike on men and animals, and the necessarily slow rate of movement, with the consequently lengthened time spent on the march, to a great extent nullifies the advantages of coolness in the tropics. Considerable diversity of opinion has been expressed as to the night marches across the Bayuda Desert. The circumstances were in every way favourable owing to the clear starlight and the character of the country, and yet confusion was of constant occurrence. Camels are at all times difficult to load, and it is necessary to keep their burdens properly adjusted. Every delay that occurs through uncertainty as to the road or disorder in the darkness, keeps the transport animals so much longer loaded up, and thus increases the strain thrown upon their strength. By starting before dawn of day, men and animals move off with empty stomachs, and suffer in consequence. During the Kabul-Kandahar march, advantage was taken of the moonlight to start as early as 2.30 A.M., in order to save them from the fierce heat of the August sun.<sup>3</sup> Marching through the Khyber in the middle of the hot weather, where rest camps existed and the road could not be mistaken by night, it was found best to avoid the long heats of the day, and move from stage to stage before daybreak. But although panics arising from the insignificant causes to which troops are in the darkness so prone have been generally avoided in the Soudan and in Afghanistan, the losses in baggage, the want of rest, the fatigue from

<sup>1</sup> Wilson, pp. 49 to 56.

<sup>2</sup> R.A.I., vol. xi, p. 635.

<sup>3</sup> Afghan Official '70-80, Sec. V, p. 72.

stumbling and passing over rough ground, and the other inconveniences inherent to night marches, made themselves felt on every occasion. There were many who would rather have braved the morning sun in the Khyber than be exposed to the furnace blast at night when on the march in place of being at rest.

That night marches, when in close proximity to the enemy, can in these wars be carried out with little fear of molestation, has been abundantly proved. Actions less striking perhaps than the decisive victory of Tel-el-Kebir and the bold assault on the Peiwar Kotal, but none the less important in illustrating the lack of precautions on the part of irregular warriors against attack during the night watches, have been ushered in again and again by marches long before dawn. Frequent episodes in the minor expeditions of the Afghan War show the facility with which surprises at daybreak can be carried out. The attack on Jummoo in the Jowaki campaign, carried out in the grey of the morning after a difficult night march, found the Afreedis wholly unprepared.<sup>1</sup> Surprises at daybreak were a distinctive feature in the Kaffir War. The Zulus appreciated the advantages of falling upon a foe before sunrise; King Theodore gained for himself a high military reputation by his night attacks and his precautions against night attacks; but the lesson to be deduced from twenty years of campaigning in all parts of the globe, is undoubtedly that in presence of enemies of this nature, night marches can be carried out with every prospect of success. On the other hand, night marching, when at a distance from hostile forces, appears seldom to achieve its object of saving troops and transport, and to be advisable only under exceptional circumstances.

*Marches generally.*—Difficulties as to transport and indifferent roads tend in these wars to shorten marches. Sir F. Roberts's march from Ali Khel to Charasiah over the Shutargardan Pass occupied ten days, the distance being 62 miles.<sup>2</sup> The march of Lord Chelmsford's force from Fort Marshall to the Umvolosi, a distance of 45 miles, required fourteen days; four of these days were halting days.<sup>3</sup> From Prabsu to Amoaful, about 40 miles apart, the British force occupied ten days.<sup>4</sup> The distance of 340 miles between Senafo and Magdala was traversed in seventy-seven days, giving an average rate of less than  $4\frac{1}{2}$  miles in the twenty-four hours.<sup>5</sup> For a long-continued march in face of the obstacles met with in such theatres of war, 6 miles a-day appear generally to be the rate of progress. Sir D. Stewart's Division moving on Ghuzni averaged 10 miles a-day, the terrain being favourable and transport efficient, while the memorable Kabul-Kandahar march was carried out at the average rate of  $15\frac{1}{2}$  miles in the twenty-four hours.<sup>6</sup> But such performances are exceptional. The Royal Irish covered 120 miles in six days *en route*

<sup>1</sup> "Recent British Battles," Grant, p. 10.

<sup>2</sup> Afghan Official, '78-80, Sec. I, pp. 33 to 35.

<sup>3</sup> Zulu Official, pp. 109 to 112.

<sup>4</sup> Brackenbury, vol. ii, Chap. II, III, IV, and map.

<sup>5</sup> Hozier, p. 91, and general account.

<sup>6</sup> R.U.S.I., vol. xxv, p. 315.

to Metemneh, a brilliant record under the most favourable circumstances, a feat that could scarcely be surpassed when the character of the ground traversed is taken into account.

The lessons to be learnt from the marches of these campaigns show that the rate of movement is generally far slower than what is customary in European warfare, and that calculations as to the probable length of time occupied in an operation must be modified accordingly. Recent events, however, afford us an assurance that where an effort is needed, the British soldier will compare as regards marching power not unfavourably with the conscript of Continental Europe.

*Defence Works.*—The art of field fortification as understood by antagonists such as we have to deal with in Asia and Africa, and as applied against them, is interesting, for it illustrates the advantages derived from the most simple defence works in such wars. Behind their rude stone breastworks or sungas the Ghilzai or Pathan will remain to meet our soldiers at close quarters. The stockades of Cachar, of Perak, and of Burmah, afforded again and again stubborn resistance. The trenches of Tel-el-Kebir, on the other hand, constructed on scientific principles and of formidable profile, prove how serious an obstacle earthworks present to storming columns advancing in compact formation. But it is the defence works devised by ourselves to meet the exigencies of irregular warfare that are most significant in pointing the moral. Zarebas, mere enclosures of thorny abatis, proved in the Soudan a sufficient protection against the onslaught of the Arabs. At Rorke's Drift a rough parapet improvised at a moment of desperate emergency out of mealie bags and biscuit boxes, enabled the handful of defenders to keep at bay the swarms of Zulus flushed with the success of Isandlwana.<sup>1</sup> Wagon laagers have become the recognized mode of defence for South African warfare. A simple breastwork sufficed to secure Fort Battyo during the Afghan night attack. The post of Dubrai near Kandahar, protected by a  $4\frac{1}{2}$ -foot wall, held out till ammunition gave out.<sup>2</sup> Haybands proved a most useful obstacle around Suakin, and mines were used with good effect. In the Naga Hills a form of stake called a "panjee," consisting of split bamboos barbed to prevent removal from the ground, was found a serious impediment in the attacks around Konoma.<sup>3</sup> The history of these struggles shows almost on every page the value of defence works of the most rude type.

*Summary of Tactical Lessons.*—Of the many lessons taught by the experiences of our small wars, the most important tactically appear to be—1st, the necessity of close formation on the one hand, when in conflict with opponents such as Zulus and Soudanese; 2nd, the admissibility of thin and dispersed orders of battle on the other, when engaged in bush fighting and hill operations; 3rd, the importance of reserving fire till the infantry arrive at close quarters; 4th, the

<sup>1</sup> Zulu Official, pp. 45, 46.

<sup>2</sup> Afghan Official, '79-80, Sec. IV, p. 67.

<sup>3</sup> R.A.I., vol. xi, p. 265.

tendency that artillery preparation will often have to prevent matters being brought to a decision; 5th, the value of the lance as a weapon for cavalry, as also, 6th, the frequent opportunities for cavalry acting dismounted; 7th, the advantages of night marches with a view to surprising the enemy at daybreak; 8th, the possibility of drawing unskilled and undisciplined antagonists into action by pretended hesitation; and 9th, the danger of broken ground in the neighbourhood of a position.

There have been incidents in these campaigns that have reflected little credit upon the British arms, but, taken as a whole, the records of twenty years of irregular warfare give proof of the happy adaptation of principles to abnormal circumstances on the part of leaders, of the intelligent appreciation of the requirements of such service by subordinates, and of the soldier-like steadiness and self-reliance of our men. When we turn from the art of war, as illustrated in operations that have taken place in the field, to the lessons as regards organization and preparation for emergency that are written on the face of recent experiences, the picture is not so bright a one.

#### ORGANIZATION.

"One of the most important points of the military policy of a State," says Jomini, "is the nature of the military institutions."

Although the reorganization of our Army on a practical basis in conformity to Continental practice has developed and regulated the military resources of the country, the experience of recent campaigns lays bare many weak points of our system, and discovers many joints in our harness. That wars of no national importance should throw the machinery out of gear and upset the calculations on which the complicated structure of our military organization has been built up, argues fundamental defects in its working out. That expeditions dispatched to coerce remote and insignificant nations cannot quit our shores without drawing upon our second line of defence, affords food for serious reflection.

*Mobilization of Reserves.*—When in the spring of 1878 the Eastern Question reached an acute stage, and the reserves were for the first time called out, the absence of a practical scheme for mobilization was sorely felt. No arrangements existed for equipping the reservists. Weeks elapsed before they could take their place in the ranks. The breakdown was complete and undeniable.

The lesson was not thrown away. The partial mobilization in 1882 gave proof of vast improvements in our organization.<sup>1</sup> Nevertheless, the arrangements for placing our army on a war footing left much to be desired. According to regulations, the reservists in the first instance joined the headquarters of their regimental districts. But, in place of being there at once equipped, they were in many cases dispatched to other depôts, and even to corps under orders for service to be there provided for. The depôts were not kept supplied with arms, accoutrements, and clothing during peace-time, ready for

<sup>1</sup> Mobilization, pp. 151 to 154.

issue to the reservists when emergency should arise. Pimlico and Woolwich were of necessity requisitioned at the last moment for all that was needful, and a great strain was thus thrown on those centres. Store-rooms exist at the depôt centres, and it is unaccountable that all equipment necessary for the forces in the district should not be there collected, ready for issue on mobilization. The reservists called out in 1885 were supplied at their depôts, and in this case no confusion occurred, and all went smoothly.

In 1882 the reserve men for the most part joined regiments with which they had no connection, a necessary consequence of partial mobilization, where all belonging to a certain class are called up irrespective of regiments. In 1885 only the reserve men of regiments actually in want of reinforcement rejoined the colours, a more convenient arrangement if less equitable. But partial mobilization in any form is objectionable, for it implies the calling out of the reserve for a purpose not contemplated at its formation. The proposals of the Localization Committee hinged on the existence of an army corps always ready for service. The engagements entered into between State and soldier imply a period in the reserve to be broken into only when vital interests of the Empire are at stake, and any summoning of men from civilian to military life to meet the requirements of campaigns of minor importance is prejudicial to the best interests of the Service. Calling out the reserves when no imminent national danger exists, and when the great emergency lies merely in the necessity of bolstering up a system that has failed in the hour of trial, is an act that verges on violation of contract. It begets a feeling of insecurity and dissatisfaction that must militate against the popularity of the military profession, and must in consequence gravely affect recruiting. The Law Officers of the Crown have recorded their opinion "that in cases of Colonial and Indian wars of *sufficient magnitude, demanding a considerable force,*" the reserves can legally be called out.<sup>1</sup> But this is not a question of law. It is a question of justice and expediency. Will employers of labour take reserve men into their service, knowing that these may be called off whenever the eccentricities of some dusky potentate demand the placing in the field of a few British soldiers?

*Organization for Small Wars.*—The reorganization of the Army was based on the supposition that a certain number of regiments first for service would be of an establishment to enable them to take the field in adequate strength, after elimination of those unfit for service. How has this worked in practice? When the news of Isandlwana necessitated the dispatch of reinforcements to Natal, the five battalions at the head of the roster required 1,500 men to bring them up to 840 rank and file.<sup>2</sup> This deficiency was made good by calls for volunteers from other home battalions. Efforts subsequently made to keep regiments first for service up to strength had placed matters in a more satisfactory condition when the Egyptian War broke out, but even then over 2,500 reserve men were needed to com-

<sup>1</sup> Mobilization, p. 102.

<sup>2</sup> *Ibid.*, p. 100.

plete the battalions detailed for service.<sup>1</sup> In 1885 again recourse was had to the reserve. Will the establishment of 940 rank and file provided by this year's Estimates<sup>2</sup> for the battalions at the head of the roster, enable them to take the field without calling either on other corps or else on the reserve? We doubt it.

The events of 1878, of 1882, and of 1885, prove that the reserves when summoned to rejoin the colours will answer the call. They show that the force exists in fact and not merely on paper, but they show that for its mobilization a practical organization is sorely needed. The Zulu War laid bare the weakness of the battalions nominally ready for service, and the Egyptian and Soudan campaigns have failed to re-establish the credit of the system as devised for Colonial warfare. But whatever shortcomings of our organization are unveiled by recent experiences as regards men, they are as nothing compared to the deplorable deficiency as regards horses, and as regards a reserve of horses brought home to us by the experiences of 1882.

*Question of Horses.*—For the Egyptian expedition 5,400 horses were embarked, a number considerably less than half the establishment of an army corps as laid down. The three regiments of cavalry of the line were given an establishment of 465 troop horses in place of 524, and yet required the transfer of no less than 591 horses from other regiments to enable them to take the field.<sup>3</sup> The artillery at home was denuded of 934 serviceable horses to bring the batteries detailed for service up to war strength, and to supply regimental transport. The engineers with a number far short of that prescribed by regulation, actually embarked only ten horses short of the total peace establishment of the corps. Of the horses remaining in England 2,450 were disqualified by age, and, therefore, unfit for service. Thus to place on a war footing 4 cavalry regiments, 8 batteries, with an ammunition column and a skeleton corps of engineers, in place of the 6 cavalry regiments, 15 batteries, 6 ammunition columns, and full engineer complement that form the establishment of an army corps, the mounted branches of the Service were reduced to a state of complete inefficiency.

The picture is not encouraging, for in 1878, at a period of great emergency, it required four weeks to purchase 2,250 horses, and in 1882 they were bought only at the rate of 100 a week.<sup>4</sup> These facts speak for themselves.

One lesson, then, to be learnt from the only campaign in which of recent years a considerable force of cavalry and artillery of the home establishment has taken part, is, that the condition of the mounted branches of the Service as regards horses will not bear the strain of the most partial mobilization, and that the formation of some reserve whence remounts can be drawn on emergency is one of the pressing necessities of the hour. The dispatch to Suakin in 1885 of two

<sup>1</sup> Mobilization, p. 108.

<sup>2</sup> This refers to Estimates, 1886-87. Establishment 830 in Estimates, 1887-88.—C. E. C.

<sup>3</sup> See Mobilization, Chap. IV, for statistics as to horses.

<sup>4</sup> Mobilization, Chap. IV.

squadrons from each of the two regiments selected for service, in place of dispatching one single regiment intact, can be accounted for only by the supposition that neither had horses sufficient to place four squadrons in the field.

In the Egyptian War the loss in cavalry horses up to the end of September was only about 10 per cent.,<sup>1</sup> a satisfactory record, bearing in mind the important services rendered by this arm, and the difficulties as regards water, forage, and "country" with which it had to contend. This shows that the care exercised in selection and rejection before embarkation was not without result.

It is worthy of note that a cavalry regiment and battery from India were speedily mounted in Natal during the Boer War, and that the animals proved serviceable. Experience so gained may be useful in future South African campaigns.

*Transport.*—That the skeleton transport service, as provided for a Continental theatre of war, is totally unsuited to the exigencies of such irregular campaigns as fall frequently to the lot of our troops, has been long recognized. When hostilities become inevitable, a transport service, suited to the conditions as they present themselves, has to be improvised. In India, where portions of the Army must always be maintained on a war footing, a nucleus of pack transport now exists, capable of rapid expansion on emergency. In this country the formation of a depôt on similar lines appears out of the question, owing to financial considerations.

Pack animals have been for ages the carriers of Egyptian commerce. The substitution of small carts in 1882 for the cumbrous G.S. wagon, failed signally to adapt wheeled transport to the sandy deserts of the Wady Tamilat. The two-horsed Maltese carts were found to require four horses,<sup>2</sup> so that half the wheeled transport became ineffective at the outset. As early as the 3rd July, a month before the sailing of the expedition, the purchase of 1,000 mules in America was recommended;<sup>3</sup> but no recourse was had to the markets of the Levant for some weeks, and so it came about that when the expeditionary force disembarked at Ismailia, the whole strain was thrown on regimental transport, and this broke down. Mules hastily procured in the Mediterranean, although urgently needed at the seat of war, were delayed at various ports till transports that had already carried troops to Egypt should arrive.<sup>4</sup> Many purchased in the United States and at the Cape were never landed. But for the railway, operations must have come to a standstill.

Inasmuch as 8,000 mules were purchased in the Mediterranean in two months for the Abyssinian Expedition,<sup>5</sup> it seemed strange that difficulties should have arisen in 1882. But the fact that 1,500 procured at Smyrna and Beyrout were vexatiously detained by the Ottoman Government, was a contingency that could scarcely have

<sup>1</sup> Goodrich, p. 224.

<sup>2</sup> *Ibid.*, pp. 218 to 221.

<sup>3</sup> Egyptian Official, p. 9.

<sup>4</sup> Mobilization, pp. 133, 134.

<sup>5</sup> Hozier, p. 68.

been foreseen.<sup>1</sup> Commander Goodrich, U.S.N., in his exhaustive Report, writes:—"Not only was the transport service the weakest point in the expeditionary force, but it is not an exaggeration to say it failed completely."<sup>2</sup> It was not till the 3rd September, twelve days after the descent on Ismailia, that the Commissariat and Transport commenced to convey supplies to the front.<sup>3</sup>

The Indian contingent had in the meantime, by 1st September, landed 1,237 mules, completely equipped, and in Colonel Low's Report the fact that these had been utilized in giving assistance to the British force, is dwelt upon with satisfaction.<sup>4</sup> The contrast is very striking, and demonstrates the value of an efficient and elastic transport service, of which the framework exists in peace-time. The transport experiences of the campaign prove very clearly the absolute necessity of providing the necessary carriage in anticipation of the commencement of hostilities in theatres of war to which the wheeled transport organized for homo service is inapplicable, and of also furnishing vessels for conveying this carriage when provided to the scene of action, entirely independent of the expeditionary force. Pack transport would be in this country unremunerative, but the formation of a *dépôt* at Cyprus appears worthy of consideration. An abundance of pack saddles should moreover be stored at our great Mediterranean places of arms, ready for an emergency.

The admirable transport service as now organized in India is the direct outcome of lessons learnt in the Afghan War. In the earlier phases of the campaign the forces engaged were reduced almost to inaction by the collapse of the transport—a collapse directly attributable to ignorance of their duties on the part of Officers placed in charge, and absence of a well-regulated system. The losses in transport animals were enormous. "In the opinion of able civil authorities one-third of the whole available beasts of burden in Scinde were destroyed in less than three months."<sup>5</sup> The operations closed with a triumph of transport arrangements in the Kabul-Kandahar march, and with regard to this, the Chief of the Department says in his Report, "I am bound to say that I consider it doubtful if the march could have been done in the time, had not the Lieutenant-General for months previous insisted on regiments as a body, and soldiers individually, learning something of transport work."<sup>6</sup> In this remark lies the pith of the whole matter. In Abyssinia also defective organization and lack of experience seriously hampered the formation of an efficient transport service.<sup>7</sup> These campaigns serve to show the all-importance of system in improvising transport for such warfare, and the necessity for some experience in the management on the part of executive Officers.

Hired transport was found in Afghanistan on the whole unsuitable

<sup>1</sup> Goodrich, p. 218.

<sup>2</sup> *Ibid.*, p. 220.

<sup>3</sup> *Ibid.*, p. 213.

<sup>4</sup> Mobilization, p. 135.

<sup>5</sup> "Notes on the Operations in Lower Afghanistan," 1878-79.

<sup>6</sup> "Staff Duties," Clarke, p. 195.

<sup>7</sup> Hozier, p. 67.

for troops actually at the front.<sup>1</sup> It is true that in the first phase of the war the hired transport compared very favourably with that purchased,<sup>2</sup> but as those in charge gained in experience this became less the case. The separation of animals belonging to an individual for detached duties gave rise to difficulty, and it was found suitable only on the line of communications. The system has its advantages in ensuring attendants of experience, but, owing to their indemnification in case of loss, owners have nothing to gain by care of their animals, and require much supervision. In South Africa hiring was largely made use of, but it was calculated in the Zulu War that there would have been an actual saving of expense had the wagons and teams been purchased outright.<sup>3</sup> In the Boer War, where operations were almost confined to Natal territory, the hire system upon the whole worked satisfactorily, and in Zululand the best transport was found to be that which was hired, if the most expensive.<sup>4</sup>

Carrier corps have frequently done good service in these wars. In Ashanti, where this was the sole means of transport, the drawbacks inseparable from the employment of manual labour for such a purpose became very apparent.<sup>5</sup> The carriers deserted by scores; the necessity for maintaining discipline caused their control to be placed in the hands of Colonel Colley, the then existing practice of the Service being set aside. "Handing over carriers to the Control Department," wrote General Wolseley, "is like pouring water into a sieve." Drastic measures became necessary to keep them together. In the Lushai and Duffla expeditions, as also in the Zulu War, the same difficulties were experienced, and the performances of carriers in these campaigns, while giving proof of great mobility, point also to the necessity of most careful organization, and for a strong leavening of capable subordinates in the corps.<sup>6</sup> Next to the difficulty of keeping carriers together at all, the great objection to this mode of transport is the liability to panic of a body of unarmed men. On the day of Ainoafu a convoy of carriers approaching Quarmon threw down their loads and took to flight.<sup>7</sup> The Zulu carrier corps on one occasion, alarmed by groundless reports, showed such disinclination to advance, that their loads had to remain all night stacked beside the road without a guard, while the corps returned for shelter to a post in rear.<sup>8</sup> The difficulty of procuring the food to which the carriers are accustomed is a fertile source of trouble. The Fantis, whose staple article of diet is the plantain, grumbled at the rice served out to them.<sup>9</sup> The Bengal Coolie Corps in Abyssinia suffered in health owing to the unsuitable character of the food supplied.<sup>10</sup>

<sup>1</sup> "Staff Duties," Clarke, p. 188.

<sup>2</sup> Transport, p. 51.

<sup>3</sup> *Ibid.*, p. 25, note.

<sup>4</sup> *Ibid.*, p. 64.

<sup>5</sup> Brackenbury, vol. ii, pp. 18 to 33.

<sup>6</sup> "Carrier Corps and Coolies," Salis Schwabe, R.U.S.I., vol. xxiv.

<sup>7</sup> Brackenbury, vol. ii, p. 183.

<sup>8</sup> "Land Transport Reports, Zulu War," 1879, p. 33.

<sup>9</sup> Brackenbury, vol. ii, p. 37.

<sup>10</sup> "Expedition to Abyssinia," Holland and Hozier, p. 438.

That the camel is wholly unsuited to operations involving daily movement—a fact well known to those who have studied the peculiarities of the animal—has been conclusively proved by the Afghan and Soudanese Wars. Slow feeders, they require frequent days of rest to give them time to graze. While their capacity for storing up water and their indifference to heat has made them the ships of the desert, their delicacy of constitution renders them unfit to withstand a great strain on their energies or to undergo hardships. For slow steady work at the base they are well adapted; with a rapidly moving column they are out of place. In the Kurum Valley during the first portion of the Afghan War, 9,496 disappeared out of a total of 13,840,<sup>1</sup> statistics that cannot but condemn the camel as a transport animal where rough work has to be accomplished. The contrast between the horses and the camels during the trying operations in the Bayuda Desert was very marked. The horses, although reduced to prostration by want of water and by fatigue, stood the severe test and soon recovered, the camels succumbed.

*General Conclusions as to Organization.*—To discuss fully the questions as to mobilization and transport that are brought forward by experiences of irregular warfare in recent years is almost beyond the scope of this essay. Only the more salient points can be touched upon. It has become the practice to point to the Egyptian campaign of 1882 as a model of operations of its kind. But do the records of the short-lived struggle bear close scrutiny? They bear witness to pluck and endurance on the part of those engaged; they afford a remarkable example of strategical skill and the resolute prosecution of a deft and daring plan; but they disclose also a radical weakness of organization and a deplorable collapse of transport. "All the machinery of the War Office," says the German historian of the campaign, "has again proved unwieldy and unpractical"<sup>2</sup>—a stricture that cannot fairly be called unjust. On this, the only occasion within the past twenty years that a force of any magnitude quitted our shores, the whole military structure of the Empire was rudely shaken. It is a lesson that may well be taken to heart.

#### EQUIPMENT.

*Tendency to lighten Weight carried by Soldier.*—The tendency has in these campaigns been generally to lighten the load carried by the soldier to the greatest possible extent consistent with maintaining the individual efficiency as a fighting machine. Napoleon's maxim that "there are five things from which the soldier must never be separated, his gun, his ammunition, his knapsack, his ration for four days, and an entrenching tool," is inapplicable to operations of this class, where great heat has to be endured and deadly climates are encountered. The knapsack or valise has been always consigned to the regimental transport. Exclusive of this, the ordinary load for the infantry soldier is 43 lbs. In Ashanti this was reduced to about 35 lbs., by

<sup>1</sup> Transport, p. 51.

<sup>2</sup> "Egyptian War of 1882," Vogt, p. 210.

leaving great coat and mess tins to the regimental carriers.<sup>1</sup> In Afghanistan great coats were generally carried on the march, but with the force that accompanied Sir F. Roberts, when the troops wore khakee clothing, cloaks were carried regimentally,<sup>2</sup> and their loads were reduced to a minimum; the actual weight carried was only 33½ lbs. At Tel-el-Kebir, without great coats but with a day's ration and 100 rounds, the load was 38 lbs.<sup>3</sup> In Zululand and during the Boer War the load with great coat was about 43 lbs.

In Ashanti one carrier was told off to three men, the kits including great coats, one waterproof sheet per man, and shelter tent between three.<sup>1</sup> The severe cold in Afghanistan frequently necessitated the conveyance of three blankets per man, and it has generally been the case that while the burden actually carried by the soldier was decreased, the kit in charge of regimental transport of necessity exceeded what is laid down. It seems not unreasonable to hope that after the experience of these wars the advisability of always carrying the valise for the soldier will receive consideration.

*Failure of Weapons.*—The jamming of the Martini at Abu Klea and Suakin at a moment of great emergency is variously attributed to defective breech action, to the choking up of the mechanism by particles of sand, and to the use of the rolled bottle-shaped cartridge. The weakness of the extractor—a question for experts—coupled with the intrusion of sand, was probably the chief cause of the failure of the rifle, but the cartridge must also have been to blame. The ammunition has been a source of complaint since the first introduction of the weapon. That solid metal cartridges, as used by foreign armies, do not exist in the British Service, can be accounted for only by their superior cost. The Service patterns are so liable to loss of shape that they require solid and heavy ammunition boxes for their transport, and if carried loose or subjected to rough usage they soon become useless. In the Nile campaign the bullets were found to drop out when ammunition was carried in bandoliers. The issue of cartridges constructed on economical principles that fail in the hour of need, is little short of a breach of trust with the soldier. It is, moreover, a fact that ammunition that had been ten years in store found its way up the Nile, and may have contributed to swell the death-roll at Abu Klea.

With regard to the deplorable crumpling up of the bayonets when opposed to the Arabs, comment is needless. We have a right to expect that this shall not occur again.

*Supply of Small-arm Ammunition.*—The question of keeping up the supply of infantry ammunition in action, which for European warfare appears well nigh insoluble, has not in these campaigns given cause for much solicitude. In Afghanistan and Egypt the regimental reserve was carried on mules, but seldom came into requisition. Procedure varied in South Africa. In some cases the

<sup>1</sup> Brackenbury, vol. i, p. 360.

<sup>2</sup> "Extracts from Divisional Orders by Lieutenant-General Sir F. Roberts," p. 19.

<sup>3</sup> Goodrich, p. 146.

ammunition-boxes were carried at the tail of the ox-wagons, an arrangement well adapted to actions such as Ulundi, but the danger of which was demonstrated at Isandlwana; in others pack transport was employed. Carriers answered admirably in Ashanti where the expenditure was heavy; they were brought up into the firing line<sup>1</sup> and distributed the ammunition during pauses in the fighting. The broken character of the country precluded pack transport from moving with the infantry in the Jowaki campaign; twelve men per company were told off to carry spare ammunition.<sup>2</sup> Opposition was trifling, so the system was never put to the test, but its defects are obvious. The suitability of mule transport for regimental reserve has been fairly well established. Their activity and hardiness adapts mules to rough work, but they require a certain training to stand fire, and, as with all pack animals, the fitting of saddles demands extreme care.

The small-arm ammunition-boxes, weighing as they do nearly 80 lbs., have been found cumbrous and inconvenient; they are unsuited to carrier transport, or to conveyance on the field of battle by manual labour. The Kabul Committee on Equipment recommended the substitution of leather tin-lined cases to hold 240 rounds, and to weigh about 28 lbs. The experiment of carrying reserve ammunition loose in sacks on mules was tried in Zululand, but the cartridges were damaged, and the system of small and portable cases, as used in the Jowaki campaign, and as suggested by the Kabul Committee, appears best adapted for general service.

The number of rounds carried by the men has varied largely. The Camel Corps in the Soudan had with them 150 rounds per man. The dead load appears in Sir C. Wilson's final march to the Nile to have obliged the men to go without their rations.<sup>3</sup> In the 1884 campaign,<sup>4</sup> and at Tel-el-Kebir, 100 rounds were carried by each man,<sup>4</sup> while at Kirbekan 60 rounds was the allowance.<sup>5</sup> In the Ashanti War 70 rounds were carried in the pouches, and 50 as the first reserve.<sup>6</sup> In Abyssinia 200 rounds per man was in regimental charge.<sup>6</sup> The large supply carried on the person in Egypt and the Soudan is noteworthy as showing the tendency, even under circumstances where a heavy expenditure was not to be expected, to exceed the allowance laid down by regulation. "Troops may starve for twenty-four hours," wrote Lord Hardinge, "but if for one hour they are deficient in ammunition they are likely to be defeated." These campaigns appear to point to the necessity of a material increase in the number of rounds carried per man. The statistics given in discussing the question of fire tactics do not, it is true, show a high average expenditure; but, on the other hand, the fighting was seldom of a prolonged and desperate character. Average expenditure cannot

<sup>1</sup> Mayne, p. 265.

<sup>2</sup> Wilson, pp. 81, 82.

<sup>3</sup> Burling, p. 182.

<sup>4</sup> Goodrich, p. 146.

<sup>5</sup> "River Column," p. 147.

<sup>6</sup> Wolseley, p. 106.

moreover be taken as a guide, for individuals, or whole companies may far exceed the average, and it is most desirable that at no point during the fight should the pouches be empty. Regimental reserve can seldom be depended upon. The large supply ordered to be carried for Tel-el-Kebir, El Teb, and during the march to Metemneh shows that leaders experienced in recent warfare have no confidence that the regulation 70 rounds per man will suffice.

The failure of the bayonet when opposed to the tough hide shields of the Arabs has given rise to suggestions as to replacing it by the sword-bayonet. The additional weight of about half a pound involved in the latter appears to be more than compensated for by its strength and its general utility. In Ashanti the Elcho sword-bayonet was in constant use beyond the Prah, cleaving passages through the dense and tangled undergrowth. In the bush around Suakin it would be most useful in cutting down the patches of mimosa and cactus, and in the formation of zarebas.

*Artillery.*—The science of gunnery has, since 1865, made gigantic strides. The matériel of our artillery has in consequence been to a certain extent in a state of transition throughout the whole period under review, and remains so to the present day. Certain inferences to be drawn from experiences of most recent campaigns are, however, of interest, as throwing light on the question of equipment, whether for Continental or for irregular warfare.

The frequency of the occasions where, as at Tamai and at Ahmed Kehl, the indifferent substitute of reversed shrapnel shell has been resorted to after the expenditure of the few rounds of case-shot carried per gun, appears to render an increase in the proportion of this latter advisable—at least for irregular warfare. At Ordahsu, at Tel-el-Kebir, and elsewhere, the artillery deliberately advanced to case range; at the Ingogo and at Abu Klea the enemy pushed up within a few yards of the guns. Such tactics call for a large supply of case-shot. At Ekowe some rounds were improvised out of jam tins to make good the want.<sup>1</sup>

The supply of artillery ammunition on the field of battle is a question of the utmost importance. In the wars under consideration the number of rounds expended has, as a general rule, been trifling, and yet the existing system has proved unequal to the strain put on it. On this point statistics are the surest guide. Except at Maiwand, where the loss of the wagons leaves the actual numbers doubtful, the heaviest expenditure on any occasion seems to have been at Tel-el-Mahuta, where two guns fired over 100 rounds apiece. During the first fight at Kassassin a Krupp gun on a truck, in charge of the Marine Artillery, fired 93 rounds, the ammunition of the Horse Artillery having given out.<sup>2</sup> At Kambula the expenditure was about 80 rounds;<sup>3</sup> at Urzoo, during a prolonged bombardment of mud villages, 18 guns used up 895 rounds, or nearly 50 rounds per gun.<sup>4</sup> But these figures are above the average.

<sup>1</sup> R.A.I., vol. xi, p. 457.

Goodrich, p. 134.

<sup>2</sup> R.A.I., vol. xi, p. 260.

<sup>4</sup> Afghan Official, '78-80, Sec. IV, pp. 40, 41.

At Laing's Neck<sup>1</sup> and at Tamai<sup>2</sup> the expenditure was about 30 rounds. At Ahmed Kehl about 20 rounds.<sup>3</sup> During the four days' severe fighting that preceded the withdrawal of the Kabul Field Force into Sherpore, less than 12 rounds were fired per gun.<sup>4</sup> At the second action of Kassassin, where a considerable force of artillery was developed on both sides, the expenditure was about 10 rounds per gun.<sup>5</sup> During the whole Egyptian War the Horse Artillery battery that first landed, and was subsequently engaged in every fight, used up only 819 rounds,<sup>6</sup> an amount well within the ammunition supply in battery charge. The general experience of the service of artillery in this irregular warfare shows an average expenditure of shell far below what is usual in Continental campaigns.

This being so, the ammunition wagon appears very unsuitable for such work. While the gun limbers carry from 24 to 36 rounds, according to the nature of the piece—a supply generally but not always sufficient for a day's fighting—the wagons contain from 72 to 108 rounds, an amount greater than is required, and, if these ponderous vehicles be brought up to the guns, there is an obvious waste of power. In Egypt these wagons proved very unserviceable. They have been described as combining the maximum of weight with the minimum of carrying capacity. At Kassassin, the wagons having stuck in the sand far in rear, the guns ran out of ammunition.<sup>6</sup> Batteries constantly arrived at the front with only the rounds carried in the gun limbers. In Afghanistan the wagons were found so inconvenient that suggestions were put forward for carrying their contents on mules and ponies.<sup>7</sup> The more elastic limber system appears better adapted to rough work, where the movement of wheeled transport in any form is difficult, than the wagon. The hooking in of extra horses on bad ground has proportionately a greater effect on a light than on a heavy carriage owing to the loss of power in long teams. At Maiwand great difficulty was found in transferring ammunition to the wagon bodies to the limbers.<sup>8</sup> It may be noted that at Maiwand and at the Ingogo the wagons all fell into the hands of the enemy.

Since Isandlwana discussion has arisen as to the armament of artillery drivers. To leave them absolutely defenceless is out of the question. At Ahmed Kehl the drivers used their pistols with effect; in Egypt they were armed with revolvers. Cavalry swords issued at the Cape were found cumbersome, and the balance of opinion of artillery Officers is apparently in favour of some form of pistol—the revolver being dangerous to friends and not sufficiently fatal to foes.

Much attention has of late years been accorded to the question of range-finding, but, as yet, the results cannot be called satisfactory.

<sup>1</sup> R.A.I., vol. xi, p. 682.

<sup>2</sup> *Ibid.*, vol. xiii, p. 46.

<sup>3</sup> Afghan Official, '79-80, Sec. IV, pp. 40, 41.

<sup>4</sup> *Ibid.*, '79-80, Sec. II, p. 14.

<sup>5</sup> Egyptian Official, p. 192.

<sup>6</sup> Goodrich, pp. 136, 245, 246.

<sup>7</sup> "Notes on Equipment of H.A. for Service in Afghanistan," Colonel Manderson, R.A.I., vol. xii.

<sup>8</sup> R.A.I., vol. xi, p. 518.

At Tel-el-Mahuta the range-finder exaggerated the distance of the hostile guns by over 1,000 yards, and it was little used in the later actions of the Egyptian War.<sup>1</sup> At Laing's Neck, under most favourable circumstances, the error was 450 yards.<sup>2</sup> On the rocky Afghan hill sides the instrument was found difficult to work. The shell is unquestionably the true range-finder for artillery; but, could a simple and trustworthy arrangement be devised, it might be of value to infantry and to mitrailleuses for long-distance fire.

*Clothing.*—The clothing of an army depending on voluntary enlistment is a subject of no small difficulty. For garrison duty in time of peace a certain pomp and circumstance are essential. The rough and ready exigencies of war make comfort and convenience of the first concern. To satisfy conditions so paradoxical there is but one method, and to this the experiences of our small wars conclusively point. We must have two kits, one for peace, the other for war. The experiment of wearing khakce in India after the return of the troops from Afghanistan, where it was found so serviceable, gave rise to general dissatisfaction, and the smart and soldier-like white clothing soon took its place. The cavalry found "putties" an excellent substitute for long boots in South Africa, in Egypt, and elsewhere, but their introduction for home service would be quite out of the question. Equipments that are admirable in the barrack square are cast aside when the order to proceed on active service arrives; coarse fabrics worn in the bush or the desert give place to the time-honoured red, as the transport steams up Channel again.

It is outside the scope of this essay to go into the details of uniform adapted to the conditions of field service. We would rather lay stress on the importance of some well-regulated system by which such alterations in equipment as may be deemed necessary where a corps is placed on a war footing, can be carried out rapidly and without friction. Each successive campaign upon which we enter tells the same story. A revolution takes place for the time being, in the kit of those who take part. Abroad, within a week of the outbreak of war, hundreds of thousands of men are turned out in completely new uniforms, which are always kept ready at regimental centres tied up in bundles, ticketed and prepared for issue. This simple system is what we want. The service kit of each man serving with the colours should be in the regimental store in regimental charge, that of each reserve man at the place to which he will first proceed on receiving notification to join. Special orders issued at the last moment as to dress, telegraphic requisitions on Pimlico, articles of the utmost importance received on the wharf after the transport had sailed, such are the inevitable consequences of our centralization, where no unit is self-contained, and where regimental stores are crammed with part-worn clothing instead of the field kits that are an acknowledged necessity.

*Carriages.*—The General Service wagon, weighing 18 cwt., has been generally discarded as too cumbrous for transport work in the

<sup>1</sup> Egyptian Official, pp. 51, 52, and note. Also Goodrich, p. 217.

<sup>2</sup> R.A.I., vol. xi, p. 690.

wild and roadless theatres of our small wars; when it has been employed, it has been a conspicuous failure. Yet on this vehicle pivots the whole system of regimental transport as worked out. In the Zulu and Boer Wars it was found ill adapted for rough travelling, it is unnecessarily massive, becomes top-heavy with bulky loads, in crossing the South African drifts and defiles its want of stability became very apparent, and it ill bore comparison with the ox and mule wagons of the country. In Egypt Maltese carts replaced the General Service wagons and were favourably reported upon, but the nature of the country rendered wheeled transport in any form difficult. They were also used where roads existed in Afghanistan and Abyssinia. The light and handy Scotch cart supplemented the great Cape wagons in Kaffraria, and proved of service in very broken ground. In the Red River Expedition the ordinary Canadian wagon, weighing 11 cwt., was used with success on tracks rapidly extemporized as the troops moved forward.<sup>1</sup> All wheeled transport turned out of Woolwich appears to be unnecessarily solid and ponderous, and is in consequence cast aside as unserviceable on the outbreak of hostilities. The questions of durability and tensile strength are allowed to outweigh the far more important one of mobility. Better far to risk an occasional breakdown by lightening, and in consequence weakening the carriage, than to be brought to a standstill through the endeavour to take out an insurance against every accident.

*Bivouac versus Camp.*—In the favourable climate of the Soudan, where rain falls seldom, and the nights are never very cold, tents were generally discarded when in near proximity to the foe. The health of the troops suffered little from the exposure during the march across the Bayuda Desert; but after Tamai, in 1884, the lack of shelter during the long heats of the day told severely on the men. During the hill expeditions on the borders of India, as in the Lushai and Jowaki campaigns, and also during the Afghan War, tents have been frequently laid aside for short periods, increasing the mobility of the force without detriment. In the fine climate and under the healthy conditions of the Red River Expedition men often preferred to bivouac in spite of the sudden rains.<sup>2</sup> During the relief of Ekowe the troops bivouacked; in the first advance to Kassassin the collapse of the transport forbade the carriage of tents, the troops in consequence suffering much from the tropical heat and glare by day. The little garrison of Potchefstroom bivouacked in its contracted fort for many weeks, exposed to the effects of the rainy season, as well as to extreme privations as regards food, and lost only 2 per cent. from disease.<sup>3</sup> Shelter tents were used in Ashanti, but, on the final advance to Coomassie over the Ordah they were left behind.<sup>4</sup> For protracted operations under an Eastern sun, or in cold and damp climates, tents are a necessity; but the impedimenta of camp equipage throw such a burden on an army, and so hamper its movements, that

<sup>1</sup> Wolsley, p. 70.

<sup>2</sup> "Red River Expedition," Hayshe, Chap. VII.

<sup>3</sup> "Siege of Potchefstroom," Lieutenant Rundle, R.A., R.A.I., vol. xi.

<sup>4</sup> Brackenbury, vol. ii, p. 198.

no efforts should be spared that can reduce them to a minimum. The roomy and portable bell tent in all campaigns where it was used has been found admirable, but even this increases the strain on the transport very materially, and the records of our small wars all point to the advisability of bivouacking whenever it is at all practicable. The great marquee tents used on the plains of India were found altogether unserviceable in Afghanistan, owing to their weight and to their requiring camels for transport, and they have been condemned for active operations in future, being replaced by the mountain battery tent. Exposure undermines the health of troops, and so militates against their success, but, on the other hand, bivouacking increases mobility and facilitates operations. With the facts before us, the advantages conferred by bivouacking appear to more than counter-balance the evil effects of exposure.

*Lessons to be learnt as regards Equipment and Organization.*—Twenty years of irregular warfare under ever-varying conditions serve, then, to throw considerable light on the vexed question of the clothing and equipment of troops in the field. Not only do the experiences gained therefrom expose the absolute uselessness of much contained in the elaborate tables on the subject, in such theatres of war as our campaigns are usually fought out in, but they raise doubts as to the value of certain articles under any circumstances.

Our wheeled transport and our artillery ammunition wagons have not proved a success, the rifle and bayonet have failed conspicuously, the personal equipment alike of men and Officers has been found unserviceable in many respects. A great Colonial Empire necessarily entails a constant recurrence of petty struggles with the savage tribes that dwell on its borders, and for such operations special provision must be made both in organization and in equipment.

As the art of troop-leading in the field is modified to meet the altered conditions of partizan and irregular warfare, so also must the administration and interior economy of an army be modified where its fractions are ever liable to operations against the guerilla and the savage. This fact cannot be too much insisted upon.

For the contingency of war with some formidable Continental Power we must needs be ready, but our military institutions appear to have been built up, and the equipments of our forces appear to have been devised, with this alone in view. It follows that the outbreak of hostilities on the most trifling scale seriously affects the working of the whole system as framed for operations on a grand scale, while at the same time the small force detailed for the contest suffers gravely in efficiency from the absence of an organization for irregular warfare.

The great military nations of the Continent when they make war, make war on a war footing and in a European climate, but we have to be prepared for making war on a peace footing and in climates bearing no resemblance to our own. It is this that introduces the greatest element of difficulty into the framing of a military system for the British Army.

*Conclusion.*—The records of the long and varied roll of campaigns in which, from 1865 to the present day, British troops have played a part will well repay a close and careful study. Struggles of this class have not the absorbing interest that surrounds the great European struggles of our time. Their episodes are less striking, their results are less decisive, their history is less clear and less intelligible. Where the motives that influenced the commanders of both contending armies are before us, their actions are of necessity more instructive as illustrations of the art of war, than where the movements and the objects of one side are wrapped in doubt. The operations of a few thousand British soldiers in remote theatres of war pitted against adversaries without arms of precision and without organization, bear no comparison, as strategical and tactical studies, with the momentous events of 1866 and 1870; but the lessons to be deduced from their story are none the less interesting and valuable.

These operations illustrate the vicissitudes of irregular warfare in every form. They teach us how to deal with the daring savage races of Africa, how to overcome the treacherous and fanatical tribesmen of the Asiatic highlands, how to conduct operations amid the tangled luxuriance of tropical forests, and how to cope with the crafty and inveterately hostile aliens who share our dominion over the Colonies south of the Zambezi. They teach us lessons strategical, tactical, and administrative. We learn from their history that there is much in our military system that is questionable, that there is not a little that is indefensible—but we learn more. We learn that the British soldier of to-day is not unworthy of the rich heritage of glorious tradition handed down to him from the dim past; that the spirit that animated our Army amid the trials and privations of a Crimean winter and during the dark days of the Indian Mutiny still exists in its ranks, needing but the opportunity to urge it to fresh victory.

The uneventful narrative of these protracted and toilsome operations is ever and anon lighted up by brilliant exploits, by deeds of gallantry and self-devotion, such as Napier loved to chronicle of yore. The prolonged and trying intervals that separate the more stirring incidents of actual conflict one from another, bear witness to the enduring of weariness and hardships cheerfully and without murmur. "The first quality of the soldier," said Napoleon, "is constancy in undergoing fatigue and privation; courage has but the second place." Our military history of the past twenty years teaches us that the personnel of our Army possesses a rich store of both. It is not the least valuable lesson written in its pages.