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SIR JOHN HALL'S REJOINDER

TO

DR. SUTHERLAND'S REPLY

TO HIS

OBSERVATIONS

ON

THE REPORT OF THE SANITARY
COMMISSIONERS,

AT

THE SEAT OF WAR IN THE EAST,

IN

1855 AND 1856.

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REJOINDER.

IT is neither my wish, nor my intention to enter at length into the Reply which Dr. Sutherland has made to my remarks on the Report of the Sanitary Commissioners in the Crimea ; but, as some of his observations, if allowed to remain unexplained, would give an erroneous impression to the reader, I feel called on to advert to them, and in doing so, as the Doctor has disclaimed all idea of personality, I beg he will receive what I am about to say with the same feeling of charity that his own remarks were written in.

No one, I believe, undervalues the importance of sanitary arrangements either on service in the field, or in the fixed abodes of man ; and few, I think, would deny the advantage of admitting a course of instruction on public health into the curriculum of education of all medical men, whether civil or military. But if Dr. Sutherland means it to be inferred, from what he states, that knowledge of this kind is confined to a few individuals, the profession at large, I imagine, would demur to such a doctrine, for no one can study the medical profession properly without becoming acquainted with the laws of health, as well as of disease ; and the technicalities of what is termed sanitary science may be easily and readily obtained from the epitomised editions of the Health of Towns Report, and the suggestions arising therefrom, which individuals have favoured the world with in popular forms. It was to these I referred in my observations, and I am sorry they do not meet with the Doctor's approbation, which I thought they would have done, considering the apparently extensive use he has made of them, and of the writings of military authors, in his sanitary recommendations.

So much importance do I attach to sanitary instruction, that I would not only admit it into the curriculum of medical education, but I would make it obligatory on all staff officers of the army to attend a course of such lectures ; and, I think, a plain code of instructions for the management of health might be drawn up with advantage for the guidance of the private soldiers, as, I understand, is the practice in some of the continental armies.

These instructions should be read and explained to the men by their officers, or, what would, perhaps, answer as well or better, they might be printed in their small account books for easy reference.

This discussion, however, is not of any importance. The main question, and the one which interests the British public, is whether the labours of Dr. Sutherland, and the other highly paid Sanitary Commissioners, with their expensive train of inspectors and scavengers, who were sent out to the East in 1855, were essentially necessary to the welfare of the army in the Crimea, and whether the sickness and mortality of the troops there were in any appreciable degree affected by their labours. I say no, and in this opinion I think I shall be joined by most men who served there.

The Commissioners arrived at Balaklava at the end of March 1855, when the difficulties the army had laboured under during the winter were being rapidly surmounted, and when health was returning to its ranks with the genial weather of spring; and, in my opinion, the result would have been equally favourable had they never set foot there. Their labours were confined principally to Balaklava; and with plenty of time on their hands, and means placed at their disposal, it was not very difficult for them to give a creditable detail in their Report of so many basket or hand-barrowfuls of dirt taken from one place and thrown into another, of so many stercoraceous deposits scented out on the hill sides, behind old walls and buildings, and in the neighbouring ravines, and of so many paunches of animals fished out of the harbour and disposed of. In fact, when the Commissioner mounts his sewage cheval he rides full tilt, and won't even look at the humble labours of his neighbours.

Dr. Sutherland, in his reply to my observations, is cynical about my recorded sanitary labours; but I beg to remind him that many suggestions are made by the principal medical officer of an army on service in the field to the general in command, which are never committed to writing, and he forgets that the daily detail of management and supply of all the hospitals in the Crimea, which at one time amounted to nearly 100, had to be attended to by me. This duty occupied much of my time, and was a constant source of toil and anxiety to me; and if he will permit me I will contrast it with his more agreeable position, as detailed in the following extract from a letter, written by a gentleman who was intimately associated with him for some time after his arrival in Balaklava:—"I look on Dr. Sutherland and the Commission as the same body virtually. Having messed and

associated with that individual for some weeks on his first arrival in the Crimea, I am enabled to give some of his impressions with respect to the sanitary state of our army. I judge from what dropped from his own lips, in conversation with myself and others. When well, he was talkative and communicative, with a disposition to look upon matters in rather an exaggerated and sentimental light. He was so engaged in writing in his cabin on board the 'Walmer Castle' when the cholera broke out and gave just cause for alarm, that even the captain and officers of the ship exclaimed—'Of what use is this man?'

"The weather was fine in April, when I and others used to take our evening walk to Kadekoi, and stroll over the ground where Dr. Sutherland says that he saw human bodies buried almost in water, and so sparingly covered with earth that even their remains protruded through the surface. This statement I condemn as a ———, and an insult to our common sense feeling of decency, and I cannot conceive how Dr. Sutherland could dare to publish it in his Report."

Dr. Sutherland, at page 31 of his reply, states that the Sanitary Report does not say anything about the burial of the dead from the hospitals in the British burial-ground at the head of Balaklava harbour; but as that was the burial-ground of all who died in hospital there during part of the winter of 1854-5, if the Report does not allude to them, to whom does it allude?

Again, at page 22, he says, "The Military Board of Health alludes to the unhealthy condition of the Turkish burial-ground above the head of the harbour, but does not mention the far worse condition of the British burial-ground."

The Military Board of Health did not advert to the British burial-ground in their Report, as they, like many thousand others who passed along the road close to it daily, failed to discover what Dr. Sutherland has described in his Report; and, I think, few men would have hazarded so bold an assertion as that given at the close of the above sentence. The Turkish burial-ground at the head of the harbour had been the subject of a special inquiry on account of its offensive condition, arising from the number of bodies deposited in it, and the superficial manner in which they were buried, and it was ordered to be closed, and the graves covered over with additional earth mixed with quick lime, which was carried into effect before the arrival of the Sanitary Commissioners, though I see they take credit for doing something of the same kind, without making any allusion to the previous labours of the military authorities. It is but fair to assume, had the British burial-ground been in the condition described by

Dr. Sutherland, it must have attracted the attention of either the Board of Mixed Officers appointed to inquire into the condition of the Turkish graveyard, which was not more than 150 yards from it, or the Special Military Medical Board of Health, as neither of them had any object to attain by concealing the circumstance, if the graveyard were in the state described by Dr. Sutherland.

This graveyard, which is put so prominently forward in Dr. Sutherland's Report and Reply, was a slip of ground by the road side at the head of the harbour, distant, I should say at a guess, about 250 yards from the general hospital. It was of small extent, and was only used during part of the winter, as the dead were buried at the foot of the vineyard, in front of the general hospital, when the army first took possession of Balaklava; and early in the spring of 1855, they were taken to a new burial-ground, about a quarter of a mile beyond the village of Kadekoi.

The piece of ground at the head of Balaklava harbour, in part of which the dead from the hospital were buried, and on which the Sanitary Commissioners expended so much of their labour, did not measure more than about 100 yards from the water of the harbour to the bridge over the small brook up the valley, and about as many from the road on the eastern side of the valley to where the brook discharged itself into the harbour originally, but a more direct course was cut for it afterwards to drain the valley of Balaklava. This piece of ground, which formed a truncated cone, was miry for some distance from the water of the harbour, and required an immense amount of labour and material to render it fit to erect wharves and storehouses on, which was eventually done, and they were of great convenience to the commerce of the port, but of insignificant importance to the health of Balaklava. The main trunk drain originally recommended by me—recommended again by the Military Board of Health, and finally cut the whole length of the valley to Kadekoi, was a measure of greater sanitary importance to the neighbouring camps than the petty sewage of the small village of Balaklava, to which the commissioners devoted so much of their time and attention, and from which Dr. Sutherland draws such exaggerated and erroneous conclusions, as I shall make manifest by and by.

BALAKLAVA,

which has been raised to the dignity of a small town by the Sanitary Commissioners, is a mere fishing village, the male inhabitants of which fled on its being taken possession of by the English, and the women and children were removed shortly after-

wards, by order of the Commander-in-Chief. Balaklava had the defects of all Eastern villages ; and during the wet weather of the winter of 1854-5, the main street and quay, which were unpaved, became, from the constant traffic of men and animals, almost impassable.

Dr. Sutherland says, a sanitary police should have been established for the health of the troops in occupation, immediately the town was taken possession of. Now, as there were no troops in occupation of the place in the first instance, beyond a few invalids encamped near the general hospital, and as not a single soldier could be spared from his immediate and proper duty in front, and there were no civil inhabitants in the place, I should like to ask him how he would have managed to carry the measure out had he been there? I admit the advantage of a sanitary police in towns, but there was no means of carrying it into effect at Balaklava during the winter of 1854-5. It is true I might have made a written representation to the Commander-in-Chief, and put on record, as the term then was, my opinion on the subject ; but knowing Lord Raglan's disposition to do all in his power for the good of the soldiers under his command, and knowing his inability to spare a single man at the time, I did not think it right to embarrass him by doing so.

In November, the sick of the Turkish army took possession of a number of houses in the village, and an effort was made to obtain Turkish soldiers for the sanitary affairs of Balaklava, and some were granted in November by the Pasha in command of the nearest Turkish camp ; but the men were disgusted with the employment, and the prejudices of their faith rendered it still more irksome to them under Christian command, so that little good was effected by the measure. Any one who has ever served with an allied army, where the supreme command is not vested in one person, will readily understand the difficulty that was experienced in dealing with that part of the village which was occupied by the Turks ; but after the arrival of the 71st Regiment, in Dec. 1854, some progress was made in repairing the streets and quay, but it was slow work, as the men had neither hand-carts nor barrows, and they were compelled to carry the stones in their hands. Fortunately, the cold of winter prevented any injurious effects from the filthy state of Balaklava ; and when the Turkish sick were removed out of the place, immediate steps were taken to purify the houses they had occupied by lime-washing. About this time the railway navvies began to pull down houses to form the line of rail which ran through two-thirds of the village, and when the Sanitary Commissioners arrived at Balaklava at the end

of March 1855, these operations were in progress. The streets and quays were being repaired by the debris of the houses pulled down by the railway navvies, and Lieut.-Colonel Hardinge, the active and intelligent commandant of the place, was using energetic means to remove the accumulated dirt, not of six months, as stated by Dr. Sutherland, but of years, and in due course of time it would have been accomplished, and wharves would have been built, and other improvements carried out if the Commissioners had never arrived.

Dr. Sutherland himself must have been impressed with this idea, for when applied to in his capacity of Sanitary Commissioner about an accumulation of dirt near some huts that were occupied by native drivers and railway navvies, he referred the applicant to the commandant, observing, to the amazement of several persons who were present, that he had nothing whatever to do with the removal of nuisances. At a subsequent period the commandant, I was told, had even to remonstrate with the Sanitary Commissioners concerning the filth which had been allowed to accumulate in the immediate neighbourhood of their own dwelling.

At page 28, in his reply, Dr. Sutherland states, "That the bad sanitary condition of the town and harbour of Balaklava and their vicinity, was the cause of much sickness in the town, on board ship, and in the neighbouring camps." This is a broad assertion of the doctor's, which is unsupported by experience, for it is well known that the troops encamped around Balaklava were infinitely healthier than those in front during the whole of the winter and spring of 1854-5, and at that period the place was certainly in its worst sanitary condition, so far as mud and other impurities were concerned, but the cold of winter rendered them in a great measure innocuous, so that the statement may be taken as a mere assumption on the part of Dr. Sutherland; and to prove that privation, exposure to inclement weather, and excessive duty, were the main causes of disease in the British army, one need only contrast a division encamped in front with one encamped in the immediate vicinity of Balaklava during the winter of 1854-5. Or what would be still more to the point, the 71st Regiment might be taken as an example, the reserve battalion of which, 417 strong, arrived from England at Balaklava about the middle of December 1854, and was landed and encamped at the head of the harbour for nine or ten days, when it was brought into the village, and quartered in houses and tents near the general hospital. In February, the 1st battalion, 473 strong, joined at Balaklava from Corfu, and the whole regiment was huttet in a

ravine above 250 yards above the head of the harbour, leading to the eastern heights of Balaklava, and remained there until the month of May, when it embarked with the expedition for Kertch. During the months of December 1854, and January 1855, only two deaths are returned in the regimental monthly sick returns, and as these were both from cholera, I apprehend their sick must have been treated and accounted for in the general hospital at Balaklava.

In February 1855, when their own regimental hospital was established, the surgeon returns 87 admissions and 5 deaths, out of a strength of 890 men; in March, 143 admissions and 5 deaths; and in April, 101 admissions and 4 deaths. In May the regiment embarked for Kertch.

The improvement in health of the brigade of Guards, which was brought down from the plateau in front of Sebastopol to the western heights of Balaklava, towards the end of February 1855, was very marked indeed; but as the health of the whole army was at that time beginning to improve, the same importance cannot be attached to this instance as to the cases of the regiments that were encamped near Balaklava during the whole winter; and I will merely give as an example the admissions and deaths in the Guards during January 1855, the month before they came down to Balaklava from the plateau in front of Sebastopol, and during the month of March, the month after their arrival on the western heights of Balaklava.

		Strength.	Admissions.	Deaths.
On Plateau before Sebastopol.	January, 1855, Grenadier Guards .	415	268	26
	" Coldstream Guards .	429	182	35
	" Fusilier Guards .	530	169	34
		<u>1374</u>	<u>619</u>	<u>95</u>

Being a ratio of Admissions to strength per month of 45·05 per cent.
And of Deaths to strength " 6·91 per cent.

On Western Heights of Balaklava.	March, 1855, Grenadier Guards .	325	68	0
	" Coldstream Guards .	326	101	10
	" Fusilier Guards . .	725	106	2
		<u>1376</u>	<u>275</u>	<u>12</u>

Being a ratio of Admissions to strength per month of 19·98 per cent.
And of Deaths to strength " 0·08 per cent.

The sickness and mortality in the Coldstream Guards were increased during the month of March by their occupation of some huts at the head of the harbour, near the Turkish burial-ground, which had been objected to by me, and there some cases of spotted

typhus fever occurred amongst the men before they were removed to the heights above.

The health of a wing of the 2nd battalion Rifle Brigade, which was quartered on the eastern heights of Balaklava during the winter, was comparatively good, while the other wing, which was stationed on the plateau in front of Sebastopol, suffered severely. The wing above Balaklava, which was 321 strong, lost only two men by disease during the quarter ending 31st March, 1855. One, a case of dysentery, and the other a case of apoplexy.

The light division, (which was encamped on the plateau in front of Sebastopol, had a fair share of the toil and privation which the army underwent during the winter of 1854-5, and was not more unhealthy than its neighbours,) may be contrasted with the cavalry division which was encamped in the Kadekoi valley, and two troops of horse artillery, one of which was encamped with the cavalry division in the Kadekoi valley, and the other close to Balaklava.

In the month of December, the cavalry division, consisting of the 4th and 5th Dragoon Guards, 1st, 2nd, and 6th Dragoons, 4th and 13th Light Dragoons, 8th and 11th Hussars, and 17th Lancers and C and I troops of Horse Artillery,

Out of a strength of .	2586	Admitted	750	and Lost	16	by Death.
1855 January . .	2434	„	537	„	16	„
„ February . .	2328	„	330	„	20	„
„ March . .	2268	„	274	„	11	„
	<u>9616</u>		<u>1891</u>		<u>63</u>	

which gives a ratio of 78.66 per cent. of admissions to mean strength, and of 2.62 per cent. of deaths to mean strength, during the four months; but it must be borne in mind that these regimental returns merely embrace the medical transactions in the Crimea, and do not include the deaths in general hospital at Scutari. The same rule applies to the following statement, regarding the light division for the same period.

Regiments:—7th Fusiliers; 19th Regiment; 23rd Fusiliers; 33rd Foot; 34th Foot; 77th Foot; 88th Foot; 90th Foot; left wing 2nd Battalion Rifle Brigade; and, in February and March, the 97th Foot.

December, 1854 . . .	Strength	5090	Admitted	1663	Died	258
January, 1855 . . .	„	5061	„	1742	„	305
February, „ . . .	„	5337	„	1327	„	182
March, „ . . .	„	5391	„	851	„	97
		<u>20879</u>		<u>5583</u>		<u>842</u>

which gives a ratio of 106.95 per cent. of admissions to the mean strength, and of 16.13 per cent. of deaths to mean strength.

I have entered more at length into this subject than may be deemed necessary by some ; but I was anxious to show that dirty as Balaklava was, it was not, even during the very worst period of its wretchedness, the focus of disease that has been represented by Dr. Sutherland in his Report and Reply. Nor can I believe he could ever have seriously thought it was so, or he would never have permitted the Army Works Corps to place one of their hutted encampments in the bed of the Balaklava valley, not more than 200 or 250 yards from the head of the harbour, and close to the Turkish and British burial-grounds, which have been so graphically described by him. It was not only near to these two burial-grounds, but close to, if not partly on, the burial-ground which was used by the Turks for a time after that at the head of the harbour had been closed in consequence of the Report of the Mixed Board which was assembled to take its condition into consideration. The encampment of the Army Works Corps was, in my opinion, placed in about as objectionable a site as it was possible to select ; and I remember recommending the medical officer in charge to protest against its continuance. The medical officers of the Army Works Corps were not placed under my direction, nor did they report to me for the Commander-in-Chief's information, until March 1856, and beyond supplying their wants from the general medical stores of the army, I had no control over them ; but on one occasion I recollect the medical officer in charge of the encampment complaining to me of the amount of sickness in the division, and my remarking I was not surprised at it from the site of their camp, which was in every way objectionable, and he ought to protest against it.

Now, it may be fairly asked, what could the Sanitary Commissioner have been thinking of to permit such a contradiction to his own expressed opinion to be carried out under his very eyes ? I challenge him to produce anything more at variance with the laws of sanitary science in the whole army arrangements than this was ; and in this case there was not even the plea of necessity to be advanced, as the Army Works Corps were not, like the army, compelled to be placed wherever military reasons required them.

At page 24 of his Reply, Dr. Sutherland says, " The country occupied by the allied forces at the commencement of the siege operations had been several times described by travellers and residents as peculiarly unhealthy, and their descriptions would certainly have led civilians to have adopted more than ordinary sanitary precautions in such a country."

This sentence must have been written for mere effect, as Dr. Sutherland cannot surely mean seriously to assert, that the ground occupied by the allied army before Sebastopol was peculiarly unhealthy. He knows, or ought to know, perfectly well that it was not so ; and lamentable as the condition of the British army encamped there was in the winter of 1854-5, it was not owing to locality, or want of ordinary camp sanitary arrangements, which were enjoined by General Order, and in force when the army took post there, but to the depressing effects of constant exposure to wet, inclement weather, want of proper clothing, fuel, and shelter, and excessive duty, and insufficient means of cooking the rations which were issued to the men. These were the true sources of disease in the British army in the Crimea, and they were pointed out by me to Lord Raglan as early as November 1854, in as forcible language as I could use. I not only pointed them out, but I ventured to predict the result that would probably ensue if immediate measures were not taken to remedy them. I received for answer, through the Adjutant-General, "that Lord Raglan was as well aware of the condition of the army as I was," and General Estcourt added, "there are only two courses open to us in our present position, either to abandon the siege altogether for a time, or to conduct it with a certain loss of human life until the defects you mention are removed." During the hardships of the winter of 1854-5, when it was a bare struggle for existence with every one, ordinary camp regulations were to a certain extent overlooked in the general misery, and perhaps this was a circumstance of little importance so long as the country remained locked up in frost and snow ; but immediately there was an appearance of open weather, I deemed it expedient to call attention to the necessary sanitary rules in camp, which were in abeyance, and the letter of the 24th January, 1855, to the Adjutant-General, at which Dr. Sutherland sneers, was written.

The doctor says, that as the country had been described by travellers and residents, as peculiarly unhealthy, more than ordinary precautions should have been taken. I admit this, if it had been found to be so on our arrival, but such was not the case. I had no means of access to the works of travellers. I was not certain the army was going to the Crimea until near the period of its embarkation, and I had no time to spare from important daily pressing duties, to draw up theoretical instructions to meet imaginary contingencies ; but I did what was a better thing, I placed at the disposal of the medical officers of the army the following works, which had been considerately sent out for their instruction by the Director-General of the Army Medical

Department, and I informed them by a department circular memorandum, in November 1854, that any officer who chose to apply at the medical store, would be supplied with a copy of any one, or all of them :—

- “ On Premonitory Diarrhœa in Cholera, by Dr. M'Laughlin.”
- “ On the Diseases in Turkey, in reference to European Troops, by Dr. Shulkof.”
- “ On the Personnel and Materiél for an Army of 30,000 men sent out to Turkey.”
- “ On some Specialities in the Remittent Fever of the Levant, by Dr. Bryce.”
- “ On the Prophylactic Influence of Quinine, by Dr. Byrson and Mr. Drummond.”

It must be borne in mind, when the army landed in the Crimea, it was generally believed that an attempt would be made to carry Sebastopol by a *coup de main*; and when it broke ground before the place, no one supposed the town would hold out more than a week, and until after the battle of Inkerman, on the 5th of November, few had any idea the army would have to winter on the plateau in front of Sebastopol. It was certainly very inadequately provided for such an undertaking; even the elements warred against the enterprise, and the result was very disastrous. I was absent from the Crimea from the 1st to the 23rd of October, 1854, but Dr. Dumbruck, an active, intelligent, and very energetic officer, who officiated as principal medical officer in my absence, did all in his power to further the sanitary concerns of the army; but the power of military medical officers in such matters, as is well known, is limited to suggestions and recommendations. They are not accompanied by engineers, inspectors of nuisances, and scavengers, as Dr. Sutherland was, or they would in all probability have effected as much as he did, had they been invested with the same power; but even he, I suspect, would have accomplished little, had he arrived in the first bustle of disembarkation and military preparation, when every man in the army was fully occupied with his own duties, and civilians could not be obtained for either love or money; indeed, judging from what I saw of Dr. Sutherland in comparatively quiet times, I think he would have been as helpless as any man breathing under such circumstances.

At page 21, Dr. Sutherland says, “The next sanitary proceeding was in some respects a remarkable one, both as regards the time when it took place, and the result of it. The commission of Sir John M'Neill and Colonel Tulloch, with the Sanitary

Commissioners, arrived at Constantinople on board the French mail packet, on 6th of March, 1855, and on the 8th Dr. Hall recommended Lord Raglan to appoint a Board of Health, to consider the sanitary state of the army." The inference here implied I do not object to. It is a legitimate deduction from what was stated in my observations, but it is not correct for all that. Sanitary matters had, long previous to the appointment of that board, been the subject of official correspondence with the Director-General of the Army Medical Department, and of consultation and correspondence with the military authorities on the spot, as far back as August 1854. It was in consequence of the conflicting opinions of medical officers, elicited in collecting material to enable me to furnish the statement Dr. Smith requested in January 1855, that I came to the conclusion, the general and uniform sanitary arrangements of the army would be most effectually secured by a board of superior medical officers assembled by order of the Commander-in-Chief, the proceedings of which, if approved by him, would have the support of his authority. Under this impression, my letter of the 8th of March, 1855, was written; but at that time I was not aware of the arrival of the Sanitary Commissioners at Constantinople on the 6th of the month, nor indeed, do I even think that I had then heard of their appointment, so that their arrival at a distant port could not possibly have influenced my application to the Commander-in-Chief. In my observations at page 52, there is an error in the date of the arrival of the Sanitary Commissioners at Scutari, which I beg to correct; it ought to have been the 6th of March, 1855, instead of the 26th, as printed in the observations.

At page 18, in his Reply, Dr. Sutherland makes a greater mistake than this, about the period of signing the armistice with Russia, and in his anxiety to convict me of error, he departs from his usual courteous and guarded style of writing, and indulges in stronger expressions than the case exactly merits. I stated in my observations, "that it appeared the privies themselves at Scutari were left in their original state, until March and April 1856, when, after the armistice with Russia had been signed, and it was known to all the world that peace would be proclaimed, they were fitted with patent water-closets, which was a wanton waste of public money." Dr. Sutherland says, this is "simply contrary to fact." "The original state of the drainage was improved twelve months before, by temporary means well known to sanitary engineers, and the first soil-pans were put up in February 1856, while the real fact being, that the armistice was agreed to in the middle of March." Unfortunately for the

doctor's *real fact*, the armistice was agreed to early in February 1856, and was officially notified to the army in the Crimea on the 28th of that month. My observations had reference solely to the privies within the hospitals, and not to the hogsheads placed outside the walls of the building for flushing the drains, and it scarcely merited the harsh term applied to it, as I meant one thing and Dr. Sutherland another. With regard to the patent water-closets, I admit having overlooked the following observation in Mr. Unsworth's Journal, of work performed at Scutari, during the month of February 1856. "Some of the private quarters, at the barrack hospital, were provided with soil-pans and flushing cisterns, and *six* soil-pans were also fixed at the south-west angle of the barrack hospital, with a supply of water from the Turkish cistern." These, though overlooked by me, were not put up until after the armistice had been agreed to, on the 1st of February.

In his Journal for March 1856, Mr. Unsworth says, "At the barrack hospital thirty-six soil-pans with new seat boards, and six urinals, were put up in the north-east angle of the building; down pipes and stench traps being also provided."

In the month of April 1856, when peace had actually been proclaimed, Mr. Unsworth continues:—"During the month of April, the greater part of the labour at the disposal of the Sanitary Commission was employed *in replacing the Turkish privies* at the barrack hospital with soil-pans, with the requisite fittings, and connections to afford them a good and plentiful supply of water." If this, considering that active measures were then being taken to remove the sick from the hospital as speedily as possible, without any chance of their being replaced by others from the Crimea, does not prove a useless and extravagant waste of public money, I have nothing further to say.

At pages 25 and 26, in his Reply, Dr. Sutherland says the Commissioners recommended "surface draining of the ground around huts, ridge pole ventilation, and lime-washing all huts externally to keep them cool." "The plan proposed for ventilating huts by louvered turrets, which was well carried out by Dr. Alexander in some hospitals in the light division, we have described and figured in our Report as the best method we found in use, although we recommended ventilation by raising the ridge boards of the huts instead, as being simpler."

The drainage of huts and tents had been adopted from the commencement of the campaign, and the temporary expedient of piling stones or earth against the huts when they were first erected, was to prevent them from being blown over by the wind, and

perhaps more importance has been attached by the Commissioners to this plan than it merits, for the interior of the huts was influenced more by the surface drainage, than by this expedient, which was continued to the very last without much detriment to the men's health. This plan of external protection to the huts was not only continued, but during the winter of 1855-6 it was much extended, and many huts were cased with rough masonry up to their very eaves, to the comfort, not detriment, of their inmates.

The plan of lime-washing the huts, recommended by the Sanitary Commissioners, was mischievous in its results, as it destroyed the texture of the felt covering, and rendered them leaky. Having this probable result in view, and conceiving that the temperature of the huts depended as much on the free circulation of air through them as on the colour of their roofs, I made that objection to the Commissioners' plan, when it was submitted for my opinion by the Quarter-Master-General.

The louvre turreted plan of ventilation, which was carried out in the light division by Mr. Alexander, and figured in the Commissioners' Report, was recommended by the Military Board of Health, and the ridge board plan, which Dr. Sutherland says the Commissioners recommended to be adopted, was also actually in use on their arrival in the Crimea; and Dr. Jephson, surgeon at present of the 1st King's Dragoon Guards, who suggested it from what he had seen at one of the hill stations in India, will be astonished at the doctor's assumption of credit for a recommendation that is due to himself. It is the more surprising that Dr. Sutherland should have overlooked this mode of hut ventilation, as it was adopted first at the castle hospital, Balaklava, where he had many opportunities of seeing it.

At page 32, in his Reply, Dr. Sutherland says, "The Commissioners are called to account for making certain supposititious statements, in regard to the general hospital in camp, which they are not aware exists in their Report. The condition of the ground and of the huts at the date when the inspection was made, was such as they have described."

This may be true, but the Commissioners must have selected the period when the huts, which composed the general hospital, were in a transition state from barrack to hospital use, and they must have wilfully shut their eyes to their improved condition, whenever they passed them afterwards. Their Report was not published until the spring of 1857, two years after the event described; and although the statement served well enough to make a point in it, it was neither just nor generous to resort to such an expedient, to the prejudice of their professional brethren in the

army ; but as they have spoken of the undrained and imperfectly ventilated condition of these huts, we will see what the opinion of the civil surgeons employed in the general hospital was. These gentlemen are all eminent in their profession, they are men of high honour, and have no interest in the question beyond the cause of truth, and they write as follows to Mr. Mount, who was the principal medical officer of the establishment. Civil surgeon Dr. Macleod says :—“ As to the question of ventilation, I may remark, that if by good ventilation is meant a free supply of air, then the arrangement at the general hospital could not be complained of, as though the urgency of the service often forced us to admit into our wards many more patients than any of us would have countenanced, except as a matter of necessity, still by means of the apertures cut in the walls, and the numerous holes and crannies which existed between the planks, together with the high position of the hospital, a deficiency of air was not felt.”

Dr. Lyons, pathologist to the army in the East, says, “ In reply to your letter of the 11th June, 1857, asking my opinion respecting the condition of the hospital huts of the general hospital in camp before Sebastopol,* as to ventilation, I do not know whether I could add anything to what I have already stated in my Report to Lord Panmore (at p. 101). Having had opportunities of observing the arrangements of this hospital after the affairs of the 7th and 18th of June, 8th of September, 15th of November, and all intermediate periods, I cannot conceive that *want of ventilation* should be at all urged as a charge against the huts in question. The fragility of their construction rendered them almost self-ventilating ; and independently of this, I am aware that particular attention was directed by you, and all the medical officers of the hospital, to the establishment of free ventilation, by the removal of plankings here and there, and the construction of valvular flaps. By these, and similar means, much was done towards mitigating the effects of the excessive temperature of the hot summer months of the Crimea. I have already borne my testimony officially to the great success attending the treatment of the wounded in the English hospitals, and the absence of gangrene in any epidemic form.” Mr. Rooke, civil surgeon, says, “ I have great pleasure in answering your questions concerning the efficiency of the general hospital in camp in the Crimea, of which you were principal medical officer. As I was appointed one of the surgeons of your medical staff before any patient had been received into the hospital, and having remained on duty until it was broken up, a period of more than twelve months, I may, without presumption, say that I had the

best opportunity of judging of the arrangements you made for the reception of the wounded,—the measures you adopted for the proper ventilation of the hospital huts, and of the unwearied zeal you daily evinced for the well-doing of the patients. I can bear my testimony to the healthy state, and efficient arrangements of the hospital with the greater pleasure, that being now unconnected with the military medical service, it cannot be supposed that any approbation I may express, is given in order to stand well with the powers that be. I can truly state that you availed yourself of every means in your power to make the huts as suitable as such buildings could be for the reception of the wounded. That the ventilation of the huts was not deficient, is sufficiently proved by the almost total absence of erysipelas in the hospital. After the affair of the 18th of June, I had a larger number of wounded under my care, than any other medical officer. Those whose wounds were not fatal, mostly remained until they were convalescent, a period of several weeks. I had not a single case of erysipelas attacking a wound, or following an operation, nor after the attack of the 8th of September, although my patients were as numerous as those of the other medical officers. The circulation of air through the huts was constant. I never found my wards close or disagreeable, even when all the beds were full." Such is the honourable testimony borne by these gentlemen to the condition of the general hospital in camp, and it may be well contrasted with the Sanitary Commissioners' paltry subterfuge to throw discredit on the medical department of the army. But it is in keeping with the tenor of both his Report and Reply, which are written with a species of special pleading cunning, which is intended to damn by implication, rather than by direct open manly accusation. It was not creditable for the Commissioner to creep into men's confidence, by professions of friendship and approbation, and then to throw them aside when it suited his purpose to do so.

At page 32 of his Reply, Dr. Sutherland says, I have made an unfounded statement about the two letters he wrote to me on the 16th May, 1855, concerning the removal of the Buffs, 48th and 71st Regiments, to new encamping ground, and the early treatment of the diarrhoeal stage of cholera. I do not exactly know what he means by using such a term, as I merely stated his letter of the 16th May, 1855, recommending measures that he saw being carried out on the 14th, could only have been written *pro forma*, so far as the removal of the camps was concerned; and as I had mentioned to him the precautions I had recommended on the 30th April, 1855, to be observed by medical officers for

the detection and treatment of cholera in its diarrhoeal stage, his second letter, and the only one to which he alludes in his reply, appeared to me to be equally written *pro forma*, as the measures he recommended were inapplicable to the circumstances of the case. At page 35, Dr. Sutherland insinuates that he had been misinformed by me regarding the measures directed to be taken for the detection of cholera amongst the men. I may therefore be permitted to quote part of a Medical Department Order, which I issued on the 22nd July, 1854, when cholera first broke out in Bulgaria. The first portion of the order relates to the distribution and use of cholera belts, which it is not of importance to insert here; but the part which I wish to quote is as follows, and was addressed to the principal medical officers of divisions:—"I beg you will be careful that medical officers of corps, now that cholera unhappily prevails, *make diligent inquiry daily* about the health of the men, and endeavour to impress on them the importance of immediately reporting any looseness of their bowels, and applying for appropriate remedies for checking it." Again, on the 30th April, 1855, when cholera re-appeared in the Crimea, the following circular memorandum was issued by me to all superintending medical officers:—"As cases of spasmodic cholera have occurred in different quarters within the last week or ten days, Dr. Hall requests superintending medical officers will call the attention of regimental medical officers to the subject in a manner not to create alarm, but sufficiently explicit to put them on their guard. It is of the utmost importance not to allow the first, or diarrhoeal, stage to pass over without treatment, for if collapse once set in the result is doubtful, whereas in the diarrhoeal stage it is for the most part amenable to medical treatment."

There was no reluctance on the part of the men to report their ailments, and the plan, without creating unnecessary alarm, was found to work well,—better, certainly, than that of frequent additional parades for inspection, recommended, I dare say, with the best intention by Dr. Sutherland and others, would have done, for the doctor is mistaken if he thinks suggestions to Government on sanitary matters were confined to himself and the other Sanitary Commissioners. They were not so, and the following extract from a paper of suggestions, sent out by authority, will show that the doctor's own sewage routine is viewed in pretty much the same light that he sees the sanitary labours of the medical officers of the army:—"The public is aware that a sanitary commission has been sent out to investigate the state of the hospitals at Scutari, and to employ scavengers to cleanse the camp at the Crimea. It is not our object to criticise the appointment, but there cannot be

a doubt that in this case, 'routine,' as in so many other cases, will be likely to mar useful results. The three commissioners have been long accustomed to one certain 'routine' of so-called sanitary operations, namely, *sewers, sewer-pipes, and sweeping.* We can scarcely expect them to travel out of what they have always practised; and if proof of this be wanted, it is to be found in the fact, that they have specially employed a staff of overseers, selected from Liverpool, who have been always accustomed to remove all nuisance from the streets, &c., by sweeping it up, and carting it away." "Any one who observes a scavenger's operations in sweeping even a paved court or lane, where filth has been thrown, will fully understand that the atmosphere has perhaps more power of producing evil *after the sweeping* than before it." This description, which is more graphic than complimentary, is shown, by their own published Report, to be substantially true of the labours of the Sanitary Commissioners at Scutari and Balaklava. The additional inspection parades, recommended by them and others for the detection of cholera, setting aside the alarm they would have created, must have been made without any consideration, or perhaps knowledge of the punishment they would have been, to men already worn down by duty. At home, in peaceable times, even one additional parade a day is considered a punishment; and I should like to know what any military man would have said to three additional parades a day in the Crimea, as was recommended by one gentleman, in a communication addressed to the Secretary of State for War. And as for Dr. Sutherland's grand scheme, which he takes so much credit to himself for suggesting, of setting men to watch the number of times soldiers obeyed the calls of nature in the open camp, or in the trenches, where about a third of them were daily employed, it is scarcely necessary to characterise it.

No army in this world was ever favoured with a greater number of suggestions from well-intentioned individuals, than the English army in the Crimea was; but, unfortunately, most of them were inapplicable to the wants of the period. For instance, one gentleman recommended vapour baths to be used in the Crimea for personal cleanliness and the destruction of vermin, at a time when there was insufficient fuel to cook the men's food with, and nothing but canvass cover to protect them from the inclement weather of the winter of 1854. Other suggestions that were made were of about the same value, in point of practical utility. And as for the remedies and specifics for cholera that were either recommended, or sent out by parties interested in their result, they were too numerous to mention, and ranged from extract of

arnica to burnt shoe leather! A munificent and kindly-intentioned gift of "Dalby's Carminative" was even included amongst the remedies forwarded for the use of Her Majesty's Army in the Crimea.

At page 35 in his Reply, Dr. Sutherland says I appear to have derived comfort from the comparison drawn between the sanitary condition of Balaklava and certain districts of London and other towns, in his letter to Lord Shaftesbury which was published in the *Times* newspaper. It was certainly a comfort to find such a candid statement, and I have no doubt the impression under which it was written was perfectly sincere, though the doctor seems now to be ashamed of it from the small portion he has quoted in his Reply. In the original, Dr. Sutherland stated for the information of his two friends, for whom he says the letter was written, "It will assist you further to estimate our sanitary condition if I compare it with things at home familiar to you. Balaklava harbour is much sweeter than the Thames, and the town is cleaner than *nine-tenths* of the lower districts of London, Manchester, or Liverpool. Liverpool dock basins smell worse every day than Balaklava did at the worst. When the town itself was held up to the reprobation of the civilized world, from its unburied carcasses and filth, it was not worse than entire villages I could name in our own country; and it was about on a par with the districts where knackers' yards, and private slaughter-houses, and unwholesome trades exist in the Borough, and where cholera was so fatal last year. I think it right to mention this comparison that the truth should be known."

"The same may be said of the sanitary condition of the camp. Putting out of sight the local malaria, the camp is in a much better state than the towns and villages at home, out of which the men have come."

Dr. Sutherland, in his Reply, confines himself to the last part of the first sentence above, which is confessedly the most unfavourable; and he adds that Balaklava, from neglect of sanitary precautions, had descended in six months to the unhealthy position that those at home had only attained after long years of neglect. Oh, Dr. Sutherland, fie! have you no shame in making such a statement?

SCUTARI.

At page 10, Dr. Sutherland says I ought to have stated that the cleansing and whitewashing of the barrack rooms at Scutari were written about at the request of Lord Raglan, and that there

appears to have been no sanitary advice given by any one regarding the Kulali palace, or stable hospitals.

It is necessary I should state that nearly one of the first things I did when I joined head-quarters at Varna, in June 1854, was to recommend to Lord Raglan that the upper part of the west front, and one half of the south front of the main barrack at Scutari, should be given over to the medical department, in order that the rooms might be purified and fitted up for the reception of sick. I also requested that the hospital at Abydos might be completed, and that application should be made to the Turkish Government for the remainder of the general hospital at Scutari, and for the upper wards of the military hospital at Kulali.

The barrack and riding school hospitals at Kulali were fitted up under the immediate superintendence of 1st Class Staff-Surgeon, Dr. Tice; and those of the stables and Hyder Pasha palace at Scutari, under the supervision, I believe, of the principal medical officer there.

I had no personal knowledge of these buildings, and my duties in the Crimea were so constant and laborious, that, after October 1854, I had no time to visit them; but this was the less called for, as early in 1855 they came under the supervision of an old and experienced officer of my own rank, who, I have no doubt, will be able to give explanations of many things that are stated in Dr. Sutherland's Report. After October 1854, my control over the economy of the hospitals at Scutari was merely nominal, as the principal medical officer reported direct to London; but, in my capacity of principal medical officer of the army, I was to a certain extent held responsible for their condition, and of this I have no right or wish to complain.

The conversation with Lord Raglan, quoted in my letter to Dr. Menzies of the 13th August, 1854, and referred to by Dr. Sutherland, was evidently given to add weight to my instructions; but it can hardly be adduced as a proof, nor would it be so taken by any one acquainted with the forms of official military correspondence, that the idea originated with Lord Raglan, which it certainly did not.

The subject of hospital accommodation had been matter of conversation between us on several former occasions, and when the barrack rooms at Scutari were finally given over to the medical department, he directed me to urge on Dr. Menzies the necessity of taking immediate steps to get them purified. He also instructed me to desire him to apply direct to the principal dragoman of the embassy at Constantinople, for anything he might require from the Turkish Government, in place of sending

his applications through other channels; and in the same communication I pointed out to him the portion of the barracks which I thought he ought to avoid, on account of its faulty drainage and want of repair.

At page 11, Dr. Sutherland quotes from a letter of mine to the Director-General of the Army Medical Department, under date of the 28th October, 1854, and makes me say that the hospitals at Scutari "were in a very satisfactory condition." In the copy of my letter of that date I cannot find this expression; but I see I pointed out to him the discomfort that was occasioned, on the first opening of the barrack hospital, by the non-arrival of boards and tressels, which I had ordered on the 3rd of September, 1854, to be sent down from Varna, and mentioned that 500 sets had then been received, which had enabled us to put the whole hospital establishment at Scutari "in a very creditable state," and that the sick and wounded were all doing as well as could possibly be expected. I further stated, that by the strenuous exertions and unceasing labours of 1st Class Staff-Surgeon Dr. Menzies, and the medical officers under him, our difficulties had, in a great measure, been surmounted, and in a short time, I flattered myself, we should have an hospital establishment that would bear a comparison with any other of the same magnitude, formed under similar disadvantages.

Such was my opinion at the time, and such it still remains, notwithstanding the popular indignation, which, Dr. Sutherland says, "was at that very time roused throughout all England concerning them;" and I think I was borne out in my statement. Each patient had a comfortable bed and bedding all perfectly new, the rooms and galleries were clean and not overcrowded, as there were 600 spare beds in the hospitals at Scutari at the time my letter was written. The privies and drains, of which so much was subsequently said, were not then in any way offensive, and distant as the privies were from each other, and separated as they were by a room and passage from the corridors, and placed as they were in a distinct building at the inner angles of the barrack which measured 840 feet by 630 feet, it is difficult to conceive how, with an outfall of the drainage of 148 feet in less than 200 yards, they could under almost any circumstances have become so offensive and pestilential as they are represented to have been by the Sanitary Commissioner, for it must be borne in mind that the lower floor of the barrack was not occupied by sick. I am censured by Dr. Sutherland, and accused of ignorance and incompetency, for having allowed sick and wounded men to be placed in wards at the barrack hospital, Scutari, which

measured on an average $49\frac{1}{2}$ feet in length, $31\frac{3}{4}$ feet in breadth, and $15\frac{1}{2}$ feet in height, each ventilated by three large windows opening outwards, and a door and two or more windows opening inwards into a corridor 18 feet wide, running the whole length of the building, which had numerous windows, and communicated with the inner square by means of large well staircases at certain intervals. With favourable weather, a class of patients by no means severe, and the regulated allowance of five feet of surface wall for each, few medical men, I fancy, will think there was anything so very faulty in this arrangement as a temporary expedient, nor will they perhaps consider that the necessity of resorting, in the first instance, to the more elaborate and scientific alterations of the building which were subsequently carried out by the Sanitary Commissioners, was so urgent as has been represented; but even had it been so at the period of its first occupation, there was neither time nor means to effect them.

In the course of the winter of 1854-5, the hospitals at Scutari became more crowded than was desirable, from the great influx of sick sent down from the Crimea; but that was matter of necessity, not choice, and the privies and their approaches may occasionally have been rendered dirty and offensive by the negligence of the hospital servants, but this could only have affected the corridors in their immediate neighbourhood, and not the whole of the 28 wards opening out of them, as one would be led to infer from reading Dr. Sutherland's statement, which leaves an impression as if the privies opened directly into the wards where the sick were. Whereas, the privies were placed in the barrack hospital in detached buildings, in the inner angles of the square, and in the general hospital, in detached buildings at the outer angles of the square; and I can hardly imagine the principal medical officers at Scutari would have allowed such a nuisance, as is described by Dr. Sutherland, to exist in the hospitals there.

Unfortunately, much sickness, and lamentable mortality, occurred in the British army, during the winter of 1854-5; but when the Sanitary Commissioners arrived at Scutari, in March 1855, sickness was diminishing rapidly, and the cases of diseases which presented themselves, were of a much milder character than they had been during the winter. The Sanitary Commissioners, in their Report, gave a table showing the decrease of sickness and mortality in the Scutari hospitals after their arrival, which they ascribed to their own sanitary labours in and about the buildings; but as this did not strike me to be a correct deduction, I stated in my observations that the diminished number of sick, and milder nature of the cases of disease sent down to the hospitals at Scutari

from the Crimea, after their arrival, might have influenced the results more than their flaps and traps in the privy drains ; and as an example, I mentioned the number that had been embarked, and the number that had died on the passage during two periods, the one immediately preceding, and the other immediately following the arrival of the Commissioners. I put this in as plain a manner as I could, and I thought it would have been intelligible to every one, but Dr. Sutherland has so mystified it by his subtle reasoning, that I can scarcely recognise my own statement ; and the shortest way I suppose will be to admit, that, because the Sanitary Commissioners trapped the privy drains in the barrack hospital at Scutari, sickness and mortality diminished in the Crimea.

To prove that deaths on board the hospital ships had no relation to the deaths in hospital at Scutari, Dr. Sutherland instances the month of December 1854, when a number of the sick embarked at Balaklava were labouring under cholera and its sequelæ ; and the month of February 1855, when the hospitals at Scutari were filled with fever cases that had been accumulating during the previous month. In the one case it was reasonable to expect death to occur more speedily, and in the other, in addition to the chances of serious fever cases sent down there for treatment, the worst cases of those embarked for Smyrna and Abydos were removed from the ships as they passed Scutari. This alters the doctor's proposition very much, and in his comparison between the Crimea and Scutari he leaves out of sight the fact that every slight as well as every serious case of disease admitted into hospital is included in the former, whereas during the winter of 1854-5 only serious cases of disease were sent down to the latter.

In my abstract of admissions and deaths in the Crimea, from December 1854, to August 1855, I omitted the strength of the army, to save figures, which I admit I ought not to have done ; and the doctor is quite witty on the subject : but, respectable as the increase of the British force in the Crimea was, it bore no relation to the comparative numbers of 25,000 and 2,500,000, which have been adduced as an example by Dr. Sutherland.

At pages 14 and 27 of his Reply, Dr. Sutherland gives two of what he calls corrected statistical tables, both of which are erroneous in almost every particular, but taken even according to his own showing, they tell against himself, and prove that sickness and mortality had begun to decrease in the army before the arrival of the Sanitary Commissioners at Scutari, and continued to do so until the month of May 1855, when they began to increase again ; but it would be as unjust to charge this increase to the Commissioners, as it was unfair for them to claim the merit of the

decrease which had commenced before their arrival in the country, for both these changes were owing to causes over which their trifling sewage operations at Scutari had not the remotest influence. I do not know from what source Dr. Sutherland obtained information for the two Returns which he has given in his Reply, but the annexed tables, copied from documents in my possession, will show how erroneous they are, and what little reliance can be placed on conclusions drawn from such false premises.

No. 1.—Copy of Return, inserted at page 14 of DR. SUTHERLAND'S REPLY.

MONTHS.	Sick embarked at Balaklava.	Died on Passage.	Deaths per 1000 on Sick Embarked.	HOSPITALS at SCUTARI and KULALI.		Period of Sanitary Improvements.
				Mean Sick Population.	Deaths per 1000 of cases treated.	
1854.						
September	3,987	311	78	.	.	
October	1,721	76	44	2,016	128	
November	1,902	103	54	3,119	118	
December	3,339	314	94	3,457	144	
1855.						
*January	2,144	172	80	4,440	316	
*February	2,178	41	19	4,178	427	
*Three weeks ending } March 17th	1,067	5	4·6	3,779	315	} Three weeks ending 17th March, 1855. April 7th. " 28th. May 19th. June 9th. " 30th.
April 7th	860	4	4·6	3,306	144	
" 28th	793	8	10	2,803	107	
May 19th	471	—	—	2,018	52	
June 9th	615	1	1·6	1,504	48	
" 30th	890	8	9·0	1,442	22	

No. 2.—Return compiled from original documents furnished to the INSPECTOR-GENERAL of HOSPITALS IN THE CRIMEA.

MONTHS.	Number of Sick embarked from the Crimea.	Died on Passage.	Deaths per 1000 of Sick Embarked.	RETURN of SICK treated in the HOSPITALS at SCUTARI and KULALI.						Deaths per 1000 of cases treated.	REMARKS.
				Removed in Hospital at the beginning of the Month.	Admitted.	Total treated.	Discharged.	Died.			
1854.											
September	4030	357	88	} Wounded from the Alma, and cases of cholera.	
October	1774	77	43	2277	1401	3678	1211	211	57·36		
November	1936	113	56	2256	3611	5867	1716	239	49·25		
December	4393	325	74	3867	3101	6968	1911	504	72·32	} Cholera prevailed, and very fatal this month.	
1855.											
January	3440	230	66	4548	3900	8448	2046	1207	144·17		
February	1884	23	12	5195	2688	7883	2204	1328	168·46		
March	960	5	5	4351	2833	7184	2837	555	77·25		
April	1102	5	4	3792	1767	5559	2500	201	36·15		
May	824	2	2 ^a	2858	1878	4736	2333	95	20·05		
June	1167	12	10	2308	1847	4155	2187	46	11·07		

a. Included as casualties in my observations, but on more minute examination of the Returns, I find they were sick Croat labourers, and ought to have been omitted, which would have made the number of deaths in the second period 17, instead of 19, as stated.

Return No. 2, shows so marked a decrease in the number and mortality of cases sent down from the Crimea to the hospitals at Scutari, for treatment, during the month of February 1855, that it is almost superfluous to state, that a favourable change in the health of the army had commenced before the arrival of the Sanitary Commissioners at Scutari; but if anything further were required to establish the fact, I might be allowed to quote the following extract from a communication of mine to the Director-General of the Army Medical Department, which was written on the 23rd February, and had no reference to any inquiry of this kind, so that it may be fairly taken as an unbiassed expression of my opinion on the subject:

"You will be pleased to learn that an improvement has taken place in the health of the troops of late, though I am sorry to say our sick list still continues very heavy."

"The type of fever which prevailed in the general hospital at Balaklava, and in the 93rd and some other regiments, has changed from the typhoid to the remittent, and even intermittent character. For a week or ten days preceding the 19th, the weather was mild and genial, and the men began to regain their health and spirits, but on the 19th, the wind changed to the north, and we had a violent snow storm during the 20th, but as yet I cannot observe that it has done much injury to the sick."

At the end of the month, in my weekly report to the Commander-in-Chief, I find the following observation on the same subject:—"It was wonderful to see the cheering effect the few fine days had on the health and spirits of the men; and as the winter may now be considered nearly at an end, I am full of hope and confidence."*

In the 2nd part of Dr. Sutherland's Return, it will be seen that the deaths per 1000 of cases treated, is calculated from the sick in hospital at certain fixed periods, and not from the whole number treated, which makes the mortality, that is lamentable enough in reality, appear excessive.

At page 27 of his Reply, Dr. Sutherland gives the following Table of admissions and deaths in the whole army, from December 1854, to May 1856:—

MONTHS.	Admissions to Strength per 1000 per Annum.	Deaths to Strength per 1000 per Annum.	MONTHS.	Admissions to Strength per 1000 per Annum.	Deaths to Strength per 1000 per Annum.
1854			1855		
December . . .	3888	721	September . . .	2004	121
1855			October . . .	1380	49
January . . .	4176	1173	November . . .	1176	52
February . . .	2760	979	December . . .	1332	32
March . . .	2316	561	1856		
April . . .	1716	223	January . . .	1116	21
May . . .	1944	202	February . . .	924	9
June . . .	3396	318	March . . .	972	10
July . . .	2832	152	April . . .	840	8
August . . .	2760	181	May . . .	720	7

From what data Dr. Sutherland has calculated the above table, I do not know; but it is at variance with the following per centages, which are taken from authentic documents.

In the following statement, the admissions are confined to those of a primary kind, as the transfers to general hospitals were only multiples of the same; but the

* In my sanitary observations on the Adjutant-General's Monthly Return for February 1855, the subject is entered on at greater length.

deaths include the whole mortality of the army, whether in general or regimental hospitals, or on board ship at sea.

	Per Centage of Admissions to Strength in the Crimea.	Per Centage of Deaths to Strength in all Places.	
April, 1854	3·9	0·07	
May "	10·2	0·09	
June "	9·3	0·06	
July "	17·5	1·33	} Cholera in Bulgaria.
August "	28·2	2·84	
September "	22·3	3·10	} Battle of the Alma, and Cholera.
October "	23·6	2·49	
November "	27·8	4·16	} Battle of Inkermann, and Cholera.
December "	32·4	6·01	
January, 1855	34·8	9·78	Cholera prevalent.
February "	23·0	8·16	Fever.
March "	19·3	4·68	Ditto.
April "	14·3	1·86	
May "	16·2	1·69	
June "	28·3	2·65	} Assault of Redan, and Cholera.
July "	23·6	1·27	
August "	23·0	1·51	Cholera.
September "	16·7	1·01	Cholera.
October "	11·5	0·41	} Assault of Redan. Relieved from Trench and Night Duty.
November "	9·8	0·48	
December "	11·1	0·27	
January, 1856	9·3	0·18	
February "	7·7	0·08	
March "	8·1	0·09	
April "	7·0	0·07	
May "	6·0	0·06	
June "	3·6	0·02	

The above Table exhibits a gradual increase of sickness and mortality from April 1854 to January 1855, when, from the improved condition of the men, they began to decrease; and after the capture of Sebastapol, in September 1855, which relieved the men from trench and night duty, a marked improvement in the health of the army took place, which was never interrupted so long as it remained in the Crimea.

The doctor is indignant at the sewage operations of the Sanitary Commissioners being undervalued; and, at page 11, he gives a table of the works performed, in which he allows it to be understood that they were all carried out before the 30th of June, 1855, the date to which my observations allude. But if the reports of others be taken, it will be found that some of them were not carried out for eight or nine months afterwards, and others not at all.

The Sanitary Commissioners brought out with them skilled engineers and workmen, and were invested with almost unlimited

authority to hire labourers to carry out their views, and yet, according to their own showing, it is astonishing how very little they accomplished, and how many months elapsed before their more important works were completed—for to talk of so many hand carts or baskets full of rubbish removed from one place to another, is ludicrous to any one who knows what that really means amongst Eastern labourers. I say, with these advantages at their command, and knowing how little they really accomplished, and with what difficulty they accomplished that little, one might have thought they would have had more consideration for their brethren of the military profession who were less fortunately situated, and whose powers were limited to recommendations, which had to be regulated by the exigencies of the service, and due respect and consideration for those in command.

The system of what is called putting on record recommendations and demands that you know those in authority have no means of carrying out, only creates embarrassment, without serving any useful purpose, and ought to be discountenanced and despised by all upright men.

Dr. Sutherland, at page 1 of his Reply, says that I seem to think gaining of credit is the main aim of public service. I have certainly lived long enough to be very sceptical about the philanthropy of mankind. Most men have some object in view—something which they are anxious to obtain—whether it be mere credit or more solid advantages; and, from my intercourse with Dr. Sutherland, I should say he was no exception to the general rule.

London, February 1858.

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