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REPORT OF THE ROYAL SANITARY COMMISSION (1858)*

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THE publication of this great Report just over one hundred years ago set the seal on some brilliant pioneering work in Army medical statistics by amateurs, that is investigators who were not originally employed for this express purpose. Sir Alexander Tulloch in his evidence to the Commission related how he had commenced as an amateur and eventually became a public functionary in the War Office. After the Commission reported, a statistics branch was set up on a proper basis, and the present statistics branch of the Army Medical Department may claim to be in a line of descent from this, although perhaps not a direct line, for there have been vicissitudes in the interval with periods of neglect and re-trenchment, and the present set-up derives from the Directorate of Medical (Statistical) Research that was formed during the war of 1939–1945.

The threads go back to 1816, when the Director-General, Sir James McGrigor, established returns and reports of sickness in the Army. However, the reports of the medical officers were not attended to (by the Ordnance Department) in spite of numerous representations, principally on account of the expense; neither were the records analysed, on the same ground.

Tulloch, who in 1834 was employed on the Recruiting Service, was led from an interest in pensions to a mortality inquiry, in the course of which he first met Henry Marshall, of the Army Medical Service, and published two articles in the *United Service Magazine* of 1835. He then became, at the instance of Earl Grey, Secretary-at-War, associated with Marshall in drawing up, from the

* Report of the Commissioners appointed to inquire into the Regulations affecting the sanitary condition of the Army, the organisation of military hospitals, and the treatment of the sick and wounded. Presented to both Houses of Parliament by Command of Her Majesty. H.M.S.O. 1858.

records instituted in 1816, a report to be presented to Parliament. When Marshall retired in 1836, Tulloch was joined by T. Graham Balfour, and the two were long associated; Balfour became Secretary to the Royal Sanitary Commission, and eventually first head of the statistical branch, reaching the rank of Surgeon-General.

The first of a series of reports, that on the West Indies, was published in 1838, and, as the Commissioners said, the benefit accruing to the Army from them was very great. They resulted in the move of troops from unhealthy districts, and without doubt prevented a large amount of sickness and consequent mortality. The figures for the West Indies given by Tulloch in the *Minutes of Evidence* showed a reduction in mortality from 85 per 1,000 in the years 1817–1838 to 60 per 1,000 in the years 1838–1853. This is still a vast mortality.

Thus did McGrigor's returns receive their accolade, and as put by the Commissioners in questioning Tulloch, no other person in this country except William Farr, of the Registrar-General's Office, had enjoyed the advantage of so great a range of observation. Farr, who was the leading vital statistician of his day, was drawn into the circle of friends campaigning for the reform of the Army Medical Service (and others) after the revelations of the Crimean War, and met Florence Nightingale first at dinner with the Tullochs. He had presumably known Tulloch for some time through the Statistical Society (later the Royal Statistical Society), and it is hardly coincidental that the Registrar-General's Office was set up in 1837, and the first report, for the year ending 30th June, 1838, published in 1839, the year after Tulloch and Balfour's report on the West Indies. The climate of opinion, both public and professional was obviously favourable to such works.

Tulloch and Farr formed the committee, under the chairmanship of Herbert, set up to implement the recommendation of the Royal Commission for a statistical branch in the Army Medical Department. Florence Nightingale's was the spirit that forged the various weapons which lay to hand for reforming the Army Medical Service. Brought to white-heat by the experiences of the Crimean War, she never rested while the Royal Sanitary Commission was being set up, nor indeed later. She was herself no mean statistician, and thoroughly understood the importance of statistics to her cause.

Together with Sidney Herbert, or perhaps through him, as her biographers lead us to believe, she created the Royal Commission, conducted it (off-stage, the chairman was Herbert), and saw that its recommendations were implemented.

The biographies referred to are as follows. First, and the starting point for later studies, is Sir Edward Cook's (1913), *The Life of Florence Nightingale*, in two volumes published by Macmillan and Co., written soon after Miss Nightingale's death in 1910. An abridged and revised version by Rosalind Nash appeared in 1925.

Next came the brilliant cameo by Lytton Strachey in 1918, which usually appears in *Eminent Victorians*. (Quotations here are from the joint volume with *Queen Victoria*, published as *Five Victorians* in 1942 by the Reprint Society, by

arrangement with Chatto and Windus.) Most recent is the biography by Cecil Woodham-Smith (1950), published by Constable under the title *Florence Nightingale, 1820-1910*.

All the later writers acknowledge their debt, as they must, to Cook's *Life*, but the impressions gained of Florence Nightingale vary according to the author. Rosalind Nash goes so far as to accuse Lytton Strachey of writing a caricature. It certainly is a wonderful sketch, and on re-reading it I am struck by the truth achieved in its economy, and certainly by the vividness of such a compression as when he quotes Queen Victoria: "Such a head! I wish we had her at the War Office."

We will leave it to him to state pithily the situation revealed in the Crimea that made a Royal Commission the crying need. "Errors, follies, and vices on the part of individuals there doubtless were; but, in the general reckoning, they were of small account—insignificant symptoms of the deep disease of the body politic—the enormous calamity of administrative collapse."

The reforms had in fact long been needed, but the Crimea was a dramatic occasion, dramatically presented by the war correspondent of *The Times*, and with God's gift to a public cause—the person of Florence Nightingale. She needed to be, and was, far from being merely a ministering angel. In her angry letters to Herbert she was not sparing of criticism over her Augean stables and the obstacles to be cleared, so much so that Herbert was led to protest at her vehemence.

On returning home she followed up the suggestion for a Royal Commission made by J. H. Lefroy, scientific adviser at the War Office, and pressed it to a successful conclusion. The membership was more or less packed by her, and in the end only one was of a different persuasion, the Director-General Dr. Andrew Smith, who could hardly be left out. He eventually marred the unanimity of the Report by dissenting from some of its recommendations. (His presence was balanced by that of the next Director-General, Alexander, who succeeded him as the nominee of Miss Nightingale). Herbert was, of course, the chairman: "I could do nothing without him."

Her success in getting a Royal Commission approved was probably due to a widely felt need for some action, but the Secretary of State, Lord Panmure, was enlivened into setting the thing in train by the knowledge that Miss Nightingale would otherwise publish a report on her own account. This she was quite fitted to do, for indeed she did write a work *Notes affecting the Health, Efficiency, and Hospital Administration of the British Army*, which was privately printed, and part of which was incorporated in the Commission's Report. As the Commission got under way she worked tremendously hard on the evidence, and on coaching the principals, and in the end assisted Herbert in writing the Report, the recommendations of which were similar to those of her private report. According to one source, she listed it as "one of my works."

The Commission, signed by Lord Panmure the Secretary of State for War on the 5th May, 1857, called upon Sidney Herbert and eight others to inquire into the organisation, government, and direction of the Army Medical Depart-

ment. Among other topics they were commanded to "report your opinion upon such returns or records as shall be kept by the medical officers of our Army, with a view to the preparation of a well digested and accurate body of military medical statistics."

Herbert had been Secretary of State at War when Florence Nightingale went out to Scutari, in fact it was he who asked her to go: a man she thought "of the quickest and most accurate perception I have ever known. Also he was the most sympathetic." The two were necessary to each other in this business, he the man of position, she the so-called Commander-in-Chief of the sanitary experts, the collector and collator of facts, directing tactics from behind the scenes.

As the Commissioners surveyed the field of inquiry, they found that a large amount of information existed in the reports of various earlier Commissions, and in the Statistical Reports on the sickness, mortality, and invaliding among the troops, presented to Parliament in 1838-9-40-41 and 53. (These were the Reports of Tulloch and Balfour.) In addition they examined 52 witnesses, including half the members of the Commission; the 53rd witness was Miss Nightingale, who communicated in writing.

One who had been bitterly opposed to the Crimea investigations was Sir John Hall, the Principal Medical Officer to the army in the East (the Crimea). His biography, prepared at the behest of his daughter by S. M. Mitra, appeared in 1911, the year after Florence Nightingale's death (*The Life and Letters of Sir John Hall*, Longmans, Green and Co.) and two years before that of Sir E. Cook, the father of all Nightingale biographies. This opposition was early perceived by Herbert to come from a resentment that his preparations were being shown up as inadequate. The later biographies give full play to criticism of his character, ranging from Strachey's "rough terrier of a man" to Woodham-Smith's "revengeful, powerful, a master of the confidential report." He was reputed to be a strict disciplinarian, who considered that troops should not be pampered, and when he was awarded the K.C.B., Miss Nightingale suggested that the letters stood for "Knight of the Crimean Burial-grounds." Yet their personal relations were apparently not unfriendly.

The position taken up by Sir John Hall, and he was not alone at that time, comes out quite clearly from his evidence to the Commission. The general tenor of the argument was that the spate of Commissions was unnecessary, that the remedies were known, and only the authority and finance were lacking. The particular Commission argued about had gone out to the Crimea in March 1855 as a result of the unease felt at home. In Sir John's examination he was asked whether this had a material effect on the sickness and mortality. "I do not think it affected them in any one particular instance; the result would have been the same if they had never gone there.—The sanitary commissioners claim credit for reducing the sickness at Scutari in June 1855, but the supply of sick from the Crimea had fallen off one half. In the March quarter when we sent down about 6,000 sick, out of those perhaps 250 died on the passage, marking the gravity of the disease; and in the following quarter, when they take credit for the army improving under their auspices, we sent down about 3,000 sick, and out of

those 19 died on the passage, but they had nothing to do with that; it was the character of the disease that had changed."

He added, "I do not say that you should not give proper attention to all sanitary matters."

In reply to Sir John Hall, Dr. John Sutherland, as spokesman for the Crimea commissioners, claimed no such credit: "We do attribute part of the diminished mortality in the hospitals to the very cause to which he appears desirous of attributing the whole." He then proceeded to build up a case in formidable style. First the facts, with sickening insistence. "The great hospitals at Scutari were magnificent buildings, when superficially looked at, but they were little better than pest-houses. . . . During three weeks ending 17th March, the date when our sanitary works began, 5,522 sick yielded a mortality of 93 per 1,000. After this date the outskirts of all the hospitals were cleansed and kept clean. All dead animals were immediately buried; peat charcoal was extensively used as a deodorizer for sewers, privies, and nuisances; the sewers were opened, and their contents removed; and the whole drainage was flushed out several times a day by our own inspector. . . . In four months he removed 5,114 hand carts of filth from the vicinity and from the sewers; he buried 35 carcasses and flushed out the drains and latrines by the tanks 466 times. . . . Within the first three weeks of the improvements, the mortality in all the hospitals fell to one half of what it was during the three weeks before. . . . but part of the immense reduction in the mortality (by the end of 4 months) was due, as we have stated in our report, to the less severe character of the cases sent from the Crimea."

Then he proceeded to demolish Sir John Hall's argument against the necessity for a Commission. "Statements productive of no practical result may have been made. It is even possible that recommendations sufficient may have been put in writing, but it is perfectly certain that the hospitals were in the bad sanitary condition we have described. We had no authority to inquire what recommendations had been made, nor who had neglected them. We had simply to deal with the defects as we found them." Finally a contemptuous dismissal of this opponent of reform: "Sir John Hall has expressed an opinion contrary to ours in regard to the effect of these sanitary measures on the health of the troops. The time I hope has gone by when it is necessary to combat such opinions; measures of the same nature as those carried out in the Crimea have been incorporated in numerous acts of Parliament, and paid for by rate-payers who recognise their greater than money value."

Later, in giving evidence Sutherland was at pains to explain that his vehemence was directed solely to imperfections in the sanitary system, and not against the medical service. He knew that much of the trouble lay in the lack of power of the medical officers, and in a letter published in *The Times* spoke of suggestions coming from them which "were called 'doctors' crotchets' and thrown aside."

This was naturally the attitude of the men who were in office at the time, and it seems a just one. All were agreed that Army (and Navy) medical officers had taken the lead in knowledge of the external causes of disease. It was through

them to a great extent that sanitary measures had made such rapid advances in this country; yet the Army itself had not reaped the benefit. It was necessary, as the Director-General remarked, "for the government to be more liberal in the expenditure of money as to sanitary matters."

The expert witnesses who gave verbal evidence with a bearing on statistics were Sir Alexander Tulloch and Dr. William Farr. The former defined the object of statistics as the accumulation of facts from a long period, with deductions drawn from a broad basis in which all minor errors disappear. He informed the Commission that the Army suffered little from epidemic diseases (apart from fever), and agreed with the observation that in malarious countries the greater proportion of the sick came into hospital after being on night duty; the latter was apparently a matter of common observation. On the question of overcrowding in barracks he thought that this would encourage the spread of disease, apart from the ventilation being defective. Also when asked whether ophthalmia was produced by a bad atmosphere, he mentioned another possibility, the sameness of diet. He was thus using a proper caution in drawing conclusions from the facts that had been collected. Another interesting remark of his related to recruitment (in which he had personal experience): in the anxiety to get tall men, he said, not enough attention was paid to the capacity of the chest; thus slight young men were recruited who were "the very class most subject to consumption."

Farr was downright about the limitations in drawing up a nomenclature of diseases. "We were anxious not to multiply the forms of fever beyond the power of discrimination. A great number of practitioners could distinguish diseases with minute accuracy, but the whole of the practitioners of the country would be unable to do so." Therefore they threw several forms of fever together.

Speaking of mortality, he laid claim to London being the healthiest great city in the world. Soldiers compared unfavourably.

Most of Farr's contribution was in his tables and diagrams in the Appendix, though the latter should more properly be ascribed to Miss Nightingale. The two had, of course, thoroughly discussed the presentation of the evidence, and she sent him the proofs of the statistical section of her private report, which was later incorporated in the Commission's Report. Farr was much impressed, particularly with the diagrams, which were novel and arresting. They showed the deaths in military hospitals during the Crimean War and were in a circular form with months in each segment and incidence plotted radially. They were nicknamed "coxcombs" in her correspondence, from their shape and colours. Farr's comment on the Crimean calamity which they represented was that with the exception possibly of one or two of the mediaeval epidemics, no pestilence has been recorded which would give such a picture for eight consecutive months. The whole catastrophe was caused by the zymotic diseases, namely fevers, diarrhoea, cholera, dysentery, etc. Referring to the diagram, the mortality from wounds (other than killed in action) was in the small pink cone in the centre. The mortality from non-zymotic diseases was the small adjacent black patch.

"The irregular blue surface, like the tail of a portentous comet, shows the zymotic diseases, the pests and scourges of camps and armies now, as they were of cities and towns in the Middle Ages, before the dawn of sanitary knowledge."

And now there was the evidence of Florence Nightingale herself, presented in written form as question and answer. Occupying some 30 pages of the Blue Book, it was in effect a condensed summary of her private report (the *Notes*). The most telling part was naturally in relation to the Crimea, "We had, in the first seven months of the Crimean campaign, a mortality among the troops at the rate of 60 per cent per annum from disease alone—a rate of mortality which exceeds that of the great plague in the population of London. We had a mortality in the last five months of the war two-thirds only of what it is among our troops at home. Is this not the most complete experiment in army hygiene? We cannot try this experiment over again for the benefit of inquirers at home, like a chemical experiment. It must be brought forward as a historical example."

She was at great pains to show that her methods of calculation were valid, and that other methods were not. As an example of the indices she used there were 2,145 deaths among 10,843 cases treated, which she presented as a fatality rate (as it would be termed today) of 19.8 per cent. These same deaths occurred over a period of 123 days in a hospital population of 3,140 (at one time), representing an annual mortality rate of 203 per cent, an index which could be used as she said to show the comparative sanitary condition of the sick in different hospitals. Such an index would not be used in this context today, though the first one is unexceptionable.

In validating her own figures she even ventures on an algebraical explanation, offering a proof that the number of cases treated $(C) = \frac{A + D}{2}$ where A are admissions and D are discharges (including deaths). Defining F as the number already under treatment at the first, and L as the number remaining at the last she says that under certain assumptions

$$A + \frac{F}{2} - \frac{L}{2} = C$$

$$\text{and } D - \frac{F}{2} + \frac{L}{2} = C$$

whence by addition the result follows.

On the subject of other people's indices she is merciless. Dr. Hall had reported to Lord Raglan, the Commander-in-Chief, on 3rd April, 1855, that the general health of the army continued to improve steadily. "During the present week the admissions have been in the ratio of 3.93 per cent, and the deaths to strength 0.38 per cent." (Compared with 4.35 and 0.52 the previous week.)

Said Florence Nightingale: "This mere information is simply misleading to the authorities unless indeed, which is hardly likely, they are thoroughly *au fait* at statistical inquiries. The standard of comparison all over the civilised

world is the percentage per *annum*. . . . 0.52, 3.93 per cent look nothing. But multiply 3.9 by 52 = 2,028, in order to get the annual admissions per 1,000; and it will be found that the whole force will go twice through hospital in a year, at that rate. . . . Multiply 0.52 by 52 in the same way, and it will be found that the mortality is 270 per 1,000 per annum. In other words, that more than one-fourth of the whole population will perish in a year."

To sum up her methodology, "For the purposes of accurate comparison it is necessary to reduce all our facts

(1) to unity of time,

(2) to unity of strength, or numbers under observation."

She put the case for collecting the facts with her usual trenchancy. "Where half an army may melt away from zymotics alone, or be rendered inefficient just when its services are most wanted, not by wounds, but by disease, of how vital importance is it for the authorities to be furnished with such information?"

Here for example is what they revealed of the incidence of disease in January 1855.

		<i>Admissions</i>	<i>Deaths</i>
Acute dysentery		865	210
Chronic dysentery		143	578
Scorbutic dysentery		181	44
Diarrhœa		4,191	1,199
Acute rheumatism		342	58
Chronic rheumatism		84	9
Frostbite		1,413	124
Scorbutus		542	31
		7,761	2,253

The larger part, if not all, she said, of these deaths (two-thirds of all the deaths in the Force) could be ascribed to the scorbutic type of disease; for "scorbutic" read "bad food" etc., and you have the cause.

From here on, the evidence turned to stores and so on, with the same acrid style of denunciation. The ward furniture is listed as at 1st January, 1855.

Plates (tin)	none	Bolsters	none
Candlesticks	none	Nightcaps	a few
Tin drinking cups	none	Slippers	none
Urinals (metal)	plenty	Knives and forks	none
Bed pans	some	Spoons	none
Close stools	plenty but frames wanted	Flannel Shirts	none
		Socks, pairs	none
Tin pails for tea	none at present	Drawers, pairs	none
	Some tea pots and coffee pots		

Enormous quantities were supplied from private sources at her instance. She put down a cause of the difficulties to the fear of being called a "troublesome fellow," which deterred some medical officers from making requisitions because they feared injury to their prospects. "This will be denied. But it is true for all that."

She had become an accepted authority both on the administration of hospitals—"the system of agglomerated regimental hospitals is no system at all," and on their design: "the cooking, etc., should be concentrated into one; while

human beings, sick or well, should be distributed." Organisation was her *forte*; it was what Lefroy had called for when he said that Lord Panmure could reform, but hated detail. She had in mind the chaos and confusion of early days at Scutari, when she said that a registrar was essential for a general hospital. She had in mind the essential need for knowing the extent of disease when she persisted in having a medical statistics branch set up. She used her own skill in statistics to cast scorn upon the existing methods: "I have carefully compared the statistics from six different official sources, and none of them agree. The great discrepancies in the several numbers shake confidence in their accuracy, and render it difficult to make any use of them for statistical purposes."

Her scathing commentary gave to Blue Books an unwonted publicity. It was one of the two legs on which stood the description of her as "The Passionate Statistician." The other was the enthusiasm for statistics already aroused in 1853; but the passion aroused by them was enough to shake a Government Department to its roots, whose power of passive resistance, declared her biographer, was unintelligible to outsiders.

"When I write civilly," wrote Miss Nightingale, "I have a civil answer, *and nothing is done*. When I write furiously, I have a rude letter—*and something is done* (not even then always, *but only then*)."

The Sanitary Commission's Report itself, as distinct from the *Minutes of Evidence* and other papers bound together with it, is a masterly summary of the facts, and a clear lead to action. First it shows that there is a case to remedy. The rates of mortality in the Army, at home and abroad, had averaged 33.0 per 1,000 annually from 1839 to 1853. This compared with a rate among the civil population (males of the same age) of 7.7 in healthy districts, and in the general population in England and Wales, of 9.2, from 1849 to 1853. However, since the exposure to disease abroad was so very different, it was fairer to take the mortality at home, which came to 17.5 per 1,000, as against an unhealthy town such as Manchester, with a rate of 12.4 per 1,000. True, a large proportion had served in unhealthy climates, but the Guards, who had the highest rates of all, did no duty abroad (in time of peace).

The mortality by ages is shown as compared with the general civilian population.

Annual mortality per 1,000					
				Army at home	Civilian males
20-25	...	...	...	17.0	8.4
25-30	...	...	...	18.3	9.2
30-35	...	...	...	18.4	10.2
35-40	...	...	...	19.3	11.6

It is pointed out that even this contrast is minimised since the deaths of men invalided out of the Army are not included as soldiers. There were differences according to occupation, but which should be taken as a standard? Should it be agricultural labourers (open air and so on) with a mortality of 8.0 per 1,000 or 6.1 in the provident ones who were members of friendly societies? Unfortunately the statistics of the Army could not supply the refinement of separating

depositors in the Regimental Savings' Bank, though the Commission thought it desirable.

Then as to the causes, such as want of exercise, overcrowding, insufficient ventilation, and defective sewerage. Intemperate and debauched habits had been put forward as a cause, but there was no evidence that they were very different from the habits of the labourer or the mechanic.

The excess mortality could be traced to pulmonary disease, as shown in the following table of mortality rates per 1,000.

	<i>Foot Guards</i>	<i>Inf. of the line</i>	<i>Civil popn. 24 large towns</i>
Inflammation of the lungs, pleurisy and acute catarrh	1.3	1.3	0.5
Spitting of blood, consumption, chronic catarrh, asthma and difficulty of breathing	12.5	8.9	5.8
All causes	20.4	17.9	11.9

(Note. Most of the deaths from chronic catarrh were found from the evidence of post-mortems to have been really consumption).

Four causes are listed which in civil life contributed to this type of disease:—insufficient clothing; insufficient and unwholesome food; sedentary and unwholesome occupations; the vitiated atmosphere of unhealthy dwellings. But in the Army the first three can be eliminated, and therefore it is the last, the vitiated and polluted air of the barracks, which is chiefly at fault! And this is generated by overcrowding and deficient ventilation, and the absence of proper sewerage.

As an example of what could be achieved, the mortality of the army hutted before Sevastopol in 1856 was 12.5 per 1,000 as against 17.9 for the troops at home. "Perhaps no army was ever better cared for, or more sanitary precautions taken in its behalf as regards drainage, both of surface and subsoil, cleanliness, ventilation of huts, diet, clothing, etc. In the month of May alone the mortality was only 8 per 1,000 per annum." This (paraphrasing Miss Nightingale) was the most complete case on record, on the largest scale, of neglects committed, of consequences incurred, of remedies applied, and of consequent improvements in health and efficiency. It was in contrast to the period from 1st October, 1854, to 30th April, 1855, when the rate of mortality rose as high as 600 per 1,000 per annum.

As with the barracks, so with the hospitals. The mortality at Scutari and Kulalee, reaching 427 per 1,000 treated from 1st to 28th February, 1855, arose from causes other than the severe type of disease. "The drains were nothing better than cesspools, through which the wind blew sewer air into the wards. There was no ventilation; little or no lime-washing; the ward utensils infected the atmosphere; the hospitals were overcrowded."

And now, just as these things were remedied eventually in the field, so they should be for the troops at home. The remedies proposed are several, but we need only note here the recommendation that a statistical branch be formed in the Army Medical Department; the details were to be worked out by a committee (one of four that were set up, known as Sub-Commissions).

The lines of development are briefly set down. Accurate statistics are to be collected for the advancement of medical science (case-books also are to be examined with a view to publication). There should be registrars at hospitals to prevent the inextricable confusion of the returns during the war, and a new nomenclature is to replace Cullen's nosology of 1780.

The Commission fears the neglect that will attend the cause of hygiene if statistics are not kept that will allow the comparative state of health of every station to be judged, that will trace sickness to its various causes and ascertain their relative influence, so that precautions may be taken and remedies applied. Therefore an efficient statistical staff must be formed, directed by a person versed in such work. "For a man to be at once an authority in sanitary science, in statistics, in medicine, and in surgery, etc., etc., would be impossible. It is only by a division of labour that such duties can be performed with any chance of success." They further recommend that he, with two other colleagues selected for their eminence in medical and sanitary knowledge, should form a council to advise the Director-General (this was one of the recommendations from which Andrew Smith dissented).

Reports, said Miss Nightingale, are not self-executive. There were great battles yet to be done, as in extracting money from the Chancellor of the Exchequer for improving conditions in the Army. The War Office cobwebs seemed to be clogging up the new broom. Herbert wrote: "These subs. are intolerable—half a dozen fellows sitting down to compose Minutes just for the fun of the thing on a subject which they cannot possibly know anything about"—an eager sentiment not unknown to innovators in later generations.

But there was no real opposition to the setting up of the statistical branch, whose statistics became the "best and most useful in Europe," creating an ideal that Farr himself would like to have aimed at for the civil population. In fact, the outline was already there and the first strokes etched; only the official support was lacking, as with the medical services in general. The medical statistics had indeed no finer victory to win than in gaining the day for the Royal Sanitary Commission.