greater will be the chances of the men escaping during times of war from the horrors of epidemic disease. We understand that Colonel Hamilton intends to bring the subject before the War Office.

MEDICAL SCIENCE IN WAR.

Mr. Brodrick's letter to the *Times* of June 6th under the heading of "Medical Science and Military Strength" did good service in arousing public attention and in eliciting some strong expressions of opinion as to the limitations under which medical science labours in actual war. While gratefully recognising the great services which the late Secretary for War had rendered in the way of improving the Royal Army Medical Corps we said that the Army Medical Service was still not an ideal one. In Mr. Brodrick's scheme the Director-General of the Army Medical Service had a place on the Army Council. He has since been relegated to a far more subordinate position in the Adjutant-General's Department. Now everything in war depends upon preparedness and the views and recommendations of the medical service on questions of such importance as the sanitation and health of the army in preparation for war should be of a direct and personal kind and not have to be filtered through any one of the heads of departments. The functions and responsibilities of a director-general as the representative of the Army Medical Service are of an altogether exceptional and responsible kind, and nowadays, as we all know, it is not the adjutant-general or head of any other War Office department who is blamed in case of any medical failure in a campaign but the medical service itself. Although it may have had an amount of responsibility out of all proportion to any power which it may have possessed to alter or to control the course of events, the medical service may confidently count upon having all, or an undue share, of any blame in the future. Army retrenchment is apparently the order of the day but the present Secretary of State may still give heed to the lessons of our past medical experience in war and make some announcement thereon in his forthcoming statement about the army.

JOURNAL OF THE ROYAL ARMY MEDICAL CORPS.

The June number of this journal, edited by Colonel David Bruce, R.A.M.C., C.B., F.R.S., is a very good one. It contains a number of papers on a variety of subjects of scientific, army medical, and current interest, together with the usual corps news.

NEW CHIEF FOR RUSSIAN MILITARY MEDICAL ACADEMY.

The committee of senior ordinary professors has chosen A. Ya. Danielieffsky, now occupying the chair of Medical Chemistry, as principal of the Military Medical Academy. The *Pharmazevticheski Journal* adds to this information that Professor Danielieffsky was a student in the Imperial University of Kharkoff. He was appointed Extraordinary Professor of the University of Kazan in the chair of Medical Chemistry and Physics in 1865. After being transferred to the chair of Pharmacology in 1868 he again took the chair of Physiological Chemistry. He was professor of Medical Chemistry in Kharkoff from 1885 to 1892, since which year he has occupied a similar position in the Military Medical Academy.

Major F. A. Saw, R.A.M.C., who has recently retired on retired pay, served in the operations in South Africa under Sir Frederick Carrington in medical charge of the Mashonaland Field Force, which suppressed a native rebellion in 1896 (medal and clasp), and also during the campaign of 1899 to 1901 (medal and clasp). At the fight at Stormberg we understand he brought in the wounded in the only ambulance wagon then available.

INTERNATIONAL EXHIBITION OF HYGIENE, MONTEVIDEO.—We are informed by the Consul-General for Uruguay that an International Exhibition of Hygiene will be annexed to the Third Latin-American Medical Congress, to be held in Montevideo, in the Republic of Uruguay, from Jan. 13th to 20th, 1907. The exhibition will last two months and will comprise exhibits of apparatus, models, foods and drinks, industrial, chemical, and pharmaceutical products, medical, surgical, and orthopaedic apparatus, and industrial processes relating to hygiene and presented for commercial purpose. Firms wishing to register their names as exhibitors should apply by writing to the Secretary-General of the Congress, Palacio del Ateneo, Montevideo, before Sept. 1st.

Correspondence.

"Audi alteram partem."

THE CAUSES OF LEPROSY.

To the Editors of THE LANCET.

SIRS,—I have to thank you warmly for the able and comprehensive review of my book on Leprosy which appeared in THE LANCET of June 16th and also for your very kindly references to myself. The spirit of candid inquiry and of desire for the truth which your article manifests encourages me to hope that you will not be unwilling to allow me to answer briefly the objections which your reviewer specifies against the creed which I advocate. Several of my critics who have avowed themselves not wholly convinced have been content with the vague statement that there are weak points in the arguments, without naming any one of them. You have, on the contrary, in a manner which shows much familiarity with the subject, stated clearly in what respects the suggestion of the fish-food causation of leprosy appears to be unsupported by facts. I am especially glad that this has been done, because I feel confident that only a very few words of explanation as regards each several allegation are needed.

To take first the statement that Dr. Francis Day whilst travelling in Burmah never saw a case of leprosy although the Burmese are fond of fish. The simple fact is that although Dr. Day did not see them there were plenty if they had been looked for. I answered Dr. Day's most careless statements a quarter of a century ago. He made the same assertion as regards the Straits Settlements at a time when in reality there were many lepers there. Dr. Day was a good naturalist and an authority on fish, but he did not inquire as to leprosy. It is easy enough for a traveller to see nothing of this disease unless he searches for it, and others besides Dr. Day, even some who have resided long in Burmah, have made similarly absurd statements. There is, however, not the slightest doubt as to the facts. The Burmese eat much bad fish and they have a great deal of leprosy.

In reference to Dr. Vincent Richards's conclusions I have much pleasure in agreeing with you that he was an able and painstaking inquirer but he collected his statistics on the erroneous assumption that if leprosy were due to fish it ought to prevail most where fish food is most abundant. Paradoxical as at first sight it may appear, there are many conditions in which the reverse is true. It is not the quantity but the quality of the fish which is in question. Dr. Richards wrote two reports. Your reviewer has perhaps seen only the first. In the second he admitted that the facts "*certainly seem to indicate that the consumption of fish does exercise some influence in producing the disease.*"

As regards the Sandwich Islands, the balance of evidence is, I believe, to the effect that in them, as in most of the Pacific groups, leprosy has always been an indigenous disease. I may admit, however, that it did not prevail extensively until the advent of Europeans and Chinese, and also that prior to that advent a great deal of fish was eaten. Let us ask, however, in what condition was it eaten? As your reviewer is careful to state "especially raw." Now, fresh raw fish is not suspected as a cause of leprosy, and it is on record that the islanders never practised fish-curing in any form and that they would eat their fish as soon as taken out of the water and almost before it was dead. It was the immigrant Chinese and Europeans who introduced the practice of curing, and it is very possible that some of the Chinese may have been lepers and may have tainted the food which they handled. At any rate they introduced the practice of fish-curing with all its risks.

I will not say anything more as to the denials of fish-eating by Indian lepers and others, than that I think that I have produced sufficient evidence that their statements are not in the least trustworthy (see page 155 *et seq.*). You write, quite correctly, that "caste ordinances again militate against the use of fish in many who have become lepers." It is true that they do "militate against it," but they do not wholly prevent it, and it is unquestionable that throughout India the castes which are professedly vegetarian suffer far less than others.

You cite the well-known case recorded by Dr. Benson and those by Professor W. Osler as if they were proofs of the

occasional contagiousness of leprosy. If, however, we make a clear distinction between skin-contagion and communication by the mouth, are they of any value? Is it not in the Dublin case quite likely that the brother who contracted the disease, as is supposed, from wearing his leprous brother's clothes, also exposed himself to risk by taking food which had been touched and contaminated? The two brothers lived together in a peasant's cabin and very probably used the same drinking vessels, knives, spoons, &c. The possibility of skin contagion—which perhaps ought alone to be called “contagion”—is discredited by a thousand facts, whilst the reality of mouth-communication (i.e., by food) is, I think, doubted by none. To which then ought we to refer these very exceptional facts?

As regards the failure or otherwise of segregation measures, it is too large a subject for me to discuss in a letter. I must be content to observe respecting the asserted increase in Madagascar that it may have been due to increased facilities for the transport of fish. I possess a good deal of information as regards that island but there is scarcely any place in the world from which I should less hopefully expect any trustworthy data as to the prevalence and causes of leprosy. It has been asserted respecting many other places that the disease increased when segregation was neglected but the fact is that it has often died out under absolute neglect of it and as often thriven in spite of its energetic enforcement. It is increasing now in Cape Colony, &c., in spite of the enforcement of cruel laws and it is steadily dying out in Norway although the number of those segregated has been diminishing. In the latter country registration and good advice as to eating, &c., would appear to be all that is needed. The leper is allowed to remain at home with his friends and the miseries of such places as Robben Island are unknown there.

I am, Sirs, yours faithfully,

June 30th, 1906.

JONATHAN HUTCHINSON.

HYGIENIC MEASURES AGAINST SYPHILIS.

To the Editors of THE LANCET.

SIRS,—In Dr. B. Leppington's criticism of Professor Metchnikoff's third lecture (on syphilis) it is possible to agree with him in his warnings as to the incompleteness of the experiment. Dr. Leppington, however, speaks of Professor Metchnikoff's “parrot's” cry “that hygiene must be paramount over morality” and then asks what Professor Metchnikoff means by morality? He answers, Professor Metchnikoff “evidently means that the combat with disease is to be unflinchingly carried on by means which involve a definite deterioration of public morality.” Dr. Leppington then says “the supreme ally of the hygienist is a rising level of morality, which by diminishing the area of vice diminishes the difficulty attending the campaign against the consequences of vice,” and finishes by saying “that every hygienist who casts contempt against virtue is adding to the momentum of forces against himself.” The implication of all this is that Professor Metchnikoff is engaged in a work that will lead to a diminished public morality; that he regards virtue of little value, and thus in the end will defeat his own aspirations.

Professor Metchnikoff needs no one to defend him, but Dr. Leppington's own views may be examined. He alleges (without proof) that the disease he is dealing with springs largely out of moral weakness. Does it? I am prepared to deny this. What is morality? Is it not the habit or way of life which conduces to the well-being of society and “ultimately is a matter of organisation, of instinct rather than of ratiocination? A knowledge of moral precepts, whether culled from works on ethics or heard in sermons, never made people moral, and never will. It is the ever present forces of life, heredity surroundings, that determine conduct, and the only way of affecting conduct for the better is by modifying the influence on human nature of those forces that are persistent and inescapable.”

It may be very flattering to those of us who have not contracted syphilis and who have not perhaps been where it could be acquired to regard ourselves as morally strong. But our every action is governed by inflexible laws. The man with strong desires, whose motives to gratify those desires are stronger than any other he possesses, will gratify them so long as there is an opportunity irrespective of the consequences. The man whose desires are not so strong,

whose dread of the consequences is greater than any pleasure he would derive from gratifying them, will not do so, but it is beside the question to say the one is morally strong and the other morally weak. It is sheer wrong-headedness not to recognise the fact that we cannot end the desires of either sex and that all we can do where their gratification leads to disease is to limit the baneful effects as much as possible.

The question now arises, Who people the places where syphilis can be contracted? Not men who are morally weak (whatever that means) but men whose sexual desires are strong. As for the women, let Dr. Leppington read the words that Mr. Upton Sinclair in “The Jungle” puts into the mouth of Marija. We have it also on the authority of Lady Jeune that women sell their bodies for bread. So long as our present social conditions continue crushing and condemning millions to starvation so long will there be bodies for sale. The true remedy is that which shall prevent poverty and the day of that remedy is coming, is nearing, is at hand. For the present, however, we are restricted to “regulation” or “abolition.” If it can be shown that “abolition” diminishes the amount of syphilis we should all be abolitionists. If, however, it simply serves to scatter the disease far and wide on the innocent as well as the “guilty,” surely we should all be “regulationists.” But it may be argued that that is legalising vice. It may be so, but we have had to legalise drinking and other “vices.” It is also said “inspection” demoralises, but it is sheer silliness to say that one who has to submit to the embraces of a dozen strangers every night is demoralised by the visit of a medical man once or twice a week. What, then, of the morality, or rather *immorality*, of those who, like Dr. Leppington, because regulation does not stamp syphilis out, are prepared to let each unfortunate act as a focus of disease in the district in which she lives, infecting and damning innocent women and children? Surely the unborn have the strongest claim upon us because of their innocence and helplessness. It is not necessary to despise those of our sisters who have to submit to inspection—the man who does so shows he has much to learn. We can feel for them and the stronger we feel the harder we will work for the abolition of that competitive system which is flinging millions on the street. Till that day dawns when the evils we speak of will have righted themselves no one has a right to speak of men like Professor Metchnikoff as casting contempt against virtue. The immoral man is not Professor Metchnikoff but he who would so order things as not to lead to the highest well-being of society.

I am, Sirs, yours faithfully,

Liverpool, July 1st, 1906.

C. R. NIVEN.

THE ALLEGED GROWTH OF INSANITY.

To the Editors of THE LANCET.

SIRS,—Dr. D. Nicolson in an interesting and suggestive letter published in THE LANCET of June 9th quotes from the last annual report of the Commissioners in Lunacy a statistical statement with reference to the increase in the number of the insane under their surveillance in England and Wales between Jan. 1st, 1869, and Jan. 1st, 1904—namely, from 53,177 to 119,829. The sentence containing this statement quoted by Dr. Nicolson is: “In spite of this large numerical increase, it will be found that when considered in relation to the growth of population the proportion of insane has not increased as much as the population.” Your correspondent states with regard to this quotation: “With this definite expression of opinion on the part of those who are in the best position to know I am content to leave this aspect of the question.” I do not, of course, presume to judge what precise signification Dr. Nicolson attaches to what he describes as a “definite expression of opinion” by the Commissioners in Lunacy, but it seems more than probable that this, to me, meaningless statement of the Commissioners might lead many to believe that the rate of increase of the insane under their control between 1869 and 1904 was not so great as the rate of increase of the population. What are the facts of the case as stated by the Commissioners? The numerical increase of the insane during these 35 years was 125·3 per cent. and the numerical increase of the population during the same period was only 53·6 per cent. Thus the number of the insane increased more than twice as rapidly as the population. If, however, the increase of population be taken into