INDIAN FAMINES AND INDIAN FORESTS

EVERY one who has made any sort of impartial study of, or enquiry into, the causes of the disastrous famines with which various parts of our Indian Empire are so frequently cursed and blighted agrees that they are due to one cause alone, the failure of rainfall. This is a physical cause arising from the influence of the strength or weakness of aerial currents, the south-west and the north-east monsoon winds; and the greater or less amount of rainfall that these winds bring depends entirely on conditions existing outside of India, and beyond the control of either the Indian Government or the Indian people. India always has been, and still is, mainly an agricultural country. Out of its total population nearly two-thirds, or about two hundred million souls, are dependent on agriculture for a livelihood; while the holdings are usually small, and the cultivated area is only a little over one acre per head of the total population. And in many parts agriculture is carried on under extremely uncertain and precarious conditions as to the natural supply of a sufficient amount of soil-moisture being provided by these otherwise fairly regular monsoon winds. The south-west or summer monsoon, after sweeping, saturated with moisture, across the Indian Ocean, generally bursts over Burma in May and over India in June; and this marks the beginning of the agricultural year, following two to three months of intense heat, during which the bare earth has been scorched and torrified under the fierce glare of a blazing sun in a brazen, cloudless sky, which bakes the soil hard and makes it sterile through lack of moisture.

As soon as the thirsty land gets sufficiently softened by rainfall ploughing begins, and during the next two to four months before the monsoon ceases, in September or October, or later in Burma, the various crops of millets and rice are grown for the autumn harvest, the more important for the food-supply of the people. The choice between these two main classes of crops depends chiefly on the local average amount of rainfall; in each case, however, successful agriculture depends not only on the total amount of the rainfall, but also on its favourable distribution. Heavy rains flood the low-lying tracts, while deficient rainfall and long breaks in between good showers cause drought on the higher lands. In October the ploughing and sowing

for the spring harvest begins, which includes wheat, barley, and pulses among foodstuffs in the north, and millets in the south; and these crops are dependent on the north-east or winter monsoon rains, which break late in November or early in December along the Madras coast, and about Christmas in the other parts of India which they affect.

As the result of these climatic conditions, governed by circumstances entirely beyond human control, the vast territory of the Indian Empire, about 1,100,000 square miles in area, is naturally parcelled out into more or less well-defined zones of average annual rainfall, which determine the character of the agricultural crops that can be raised. The coasts of Bombay and Burma, upon which the south-west monsoon winds first impinge and deposit much of their moisture, and the cool, thickly wooded mountain tracts in the north-east of Bengal and in Assam, have an annual average rainfall of over 100 inches. In the immediate vicinity of these three zones of heaviest rainfall, and extending all along the base of the Himalayas and throughout the deltas of the Ganges and the Brahmaputra in the Bengals, and the plains of the Lower Irrawaddy, the Sittang, and the Lower Salwin in Burma, there is an average rainfall varying from fifty to a hundred inches; and in these areas rice cultivation can be carried on with this natural water-supply. Fringing this belt of ample rainfall along the Himalayas and including the whole of Oudh, then stretching north-west only as a thinner belt, but reaching down to the Ganges delta, and thence extending over the whole of the rest of Bengal proper, the Central Provinces, most of the Central Indian States, and the northern part of Madras, comes the zone of thirty to fifty inches, whose north-western limit forms roughly a convex arc drawn from Baroda, at the head of the Gulf of Cambay, to not far above Allahabad, where the Jumna effects its junction with the Ganges, while its north-western limit describes a very sinuous line from the Tapti River to the mouth of the Kistna. In the rest of Southern India, comprising the Deccan and the greater part of Madras, the average rainfall varies between ten and thirty inches, and beyond the north-eastern limit similar averages obtain for the greater part of the United Provinces, the south-eastern Rajputana States, and the Punjab; while the Thar or Rajputana desert to the west of Bikanir and all the lower Indus valley and westwards across Beluchistan form an arid zone having under ten inches of rainfall. A large part of Central Burma forms a zone of thirty to fifty inches, while the core of the province forming the middle of the old kingdom of Ava has even less than that.

So far as variations from the normal average rainfall are concerned, the tracts blessed with fifty inches or above are much more likely to suffer from inundation than from drought; but throughout the whole of the rest of India—and that means over about four-fifths of

the total area, or nearly 875,000 square miles—there is always, except in irrigated tracts, a greater or less danger of a weak monsoon current failing to bring sufficient rainfall to satisfy the minima requirements for successful agriculture.

Naturally, too, the highest average temperatures occur in the arid tracts, the climax being attained in the Rajputana desert, which falls within the high isotherm of 90° Fahr. Another result of this widely differing rainfall is the extreme variation in the distribution and the character of the remaining woodlands, which still cover 250,000 square miles, or nearly one-fourth of the total area of India. In wet zones having a fall of over seventy-five inches evergreen tree-forests prevail; in the tracts with from about thirty to seventy-five inches the quasi-evergreen and purely deciduous forests vary greatly according to rainfall, elevation, soil, configuration, &c., while in the dry and the arid tracts with less than thirty inches the vegetation is usually scanty and more or less scrub-like.

As has been briefly indicated above, any irregularity or weakness in the rain-bringing monsoon currents, and especially in the great south-western monsoon which profoundly affects the whole of India except the eastern portion of Madras, is bound to influence the agricultural crops to a greater or less extent wherever their thriving is dependent solely on rainfall. Whenever any considerable irregularity occurs, and more particularly when there is a shortage of rain, crop-failure and consequent scarcity are bound to be the direct and immediate results. And this not only affects the landowners and the tenant occupiers, but also the poorest labouring classes who work in the fields for hire, as then there is less work for them. But even when there is a scarcity, this does not necessarily mean that famine is about to ensue. Extremely thrifty as a rule, the Indian peasant can generally survive with admirable equanimity the loss of one bad season; and by means of the good railway-net, food-grain can now be easily poured into tracts where scarcity is announced. But not being a capitalist, and the individual holdings being usually small, his credit with the local money-lenders soon shrinks when a harvest fails. And when, as is unfortunately now so very often the case, there has been a succession of years of drought, then the resources of the patient and resigned Indian peasant soon become exhausted, and famine appears with all its horrible sufferings and their terrible after-effects in the shape of epidemic diseases. On their crops failing the poorer agricultural classes first try to eke out a scanty livelihood by gathering and eating wild fruits and roots in any neighbouring jungles, and it is only when the hard pressure of actual want becomes keenly felt that they can bring themselves to quit their fields and go to the test works opened by Government for famine relief. And so strongly is the Indian peasant bound to his ancestral holding by caste and by all that he believes in, that he absolutely declines to remove from his

habitual surroundings to other parts of his province, or other parts of the empire, where vacant land is still easily obtainable in fertile regions well provided with water either naturally or artificially supplied.

In former times, when the Mahrattas and Pindaris laid waste and terrorised the whole of Central India throughout the eighteenth century, and down to the time when the entire empire came under British rule, matters were much worse than they now are, when so much has been done to improve the old systems of water-storage in tanks, and to provide abundant water perennially by vast irrigation canals. But while oppressive misrule and war have been put an end to, the blessings of peace have to a very serious extent aggravated the difficulty needing so often to be dealt with. The suppression of female infanticide, the maintenance of peace, the saving of life by such means as hospitals, improved sanitation, endeavours to restrict and overcome epidemic diseases, and famine relief on a vast scale during outbreaks of famine have all tended to increase the population very largely. And as this increase is not being balanced by a proportionate industrial development throughout the Indian Empire, or by emigration from congested districts with precarious rainfall to non-congested provinces, like Assam and Burma, with abundance of vacant virgin soil and unfailing rainfall, it simply means that whenever or wherever irregularity or shortage of rainfall is apt to produce scarcity there is all the greater danger now of this becoming a famine.

The greatest and as yet the only means of artificially providing soil-moisture is irrigation, of course; and the inquiries made by the Irrigation Commission of 1901–3 showed that, with its total population of nearly 300,000,000, about 53,000,000 acres, equal to 17·6 per cent., were ordinarily irrigated out of the total cultivated area of about 300,000,000 acres. And of these irrigation methods canals supplied 19,000,000 acres, wells 16,000,000, tanks 10,000,000, and other sources 8,000,000. For British India alone, with its population of about 220,000,000, and an average area of 226,000,000 acres annually cultivated, the area ordinarily irrigated was 44,000,000 acres, or 19·5 per cent.; and of these irrigated lands 18,500,000 acres were watered from State and 25,500,000 from private irrigation works. The areas thus protected against climatic shortcomings, and secured as regards a sufficient water-supply for agriculture by means of irrigation, are mainly those which lie within the operation of the large canal systems of the Northern Indian rivers and the deltas of the Madras rivers, and those which can be amply supplied with water from wells. But outside of these artificially protected areas and of the tracts with an assured rainfall there must always be a recurring danger of scarcity through insufficient natural moisture, and a consequent risk of famine; and this means that by far the largest part of India is continually exposed to this danger, the most frequently afflicted parts being the great Deccan plateau, forming the central portion of the peninsula of

Southern India, and the adjoining portions of the Central Provinces and the Central Indian States, although Western Bengal and Orissa, the United Provinces, and the Punjab have more than once been the scene of very severe famines, and are now again thus afflicted.

In olden times transport was primitive, and when famine occurred the people just wandered and died. Thus in 1769–70, when famine afflicted Bengal, the loss of life was estimated at 10,000,000. Without reckoning years merely of greater or less scarcity, parts of Madras have throughout the last 150 years been visited by eight famines, extending over eighteen years; and it was in connection with a scarcity which threatened to become a famine there that relief works were first opened by the British in 1792, although the obligation to provide relief for all who sought aid was not recognised till over forty years later, during a severe famine in and around Agra and Delhi in 1838, when a fixed famine wage was given (230,000*l.* being thus spent). But regular relief works under professional control were not brought into operation till the great Bellary (Madras) famine in 1854.

It was not until after British India had passed under Crown government, however, that anything in the shape of a Famine Policy was considered. Agra and Delhi having again, along with Rajputana, in 1860–1 suffered from famine extending over 53,000 square miles with a population of 20,000,000, a special inquiry, the first of the kind ordered by Government, was carried out by Colonel Baird Smith, which showed that stability of tenure and canal irrigation had already improved the people's power of endurance. And when land-locked Orissa and Bihar in Bengal and the Bellary and Ganjam districts of Madras were in 1865–7 blighted with a famine affecting 180,000 square miles with a population of 47,500,000, and severe scarcity also extended all along the south-eastern coast and into the Bombay Deccan and Central and Western Bengal, a Commission of investigation was appointed under Sir George Campbell, which effectually aroused the attention of Government to the responsibilities resting upon them.

From this time may be dated the humane modern relief-policy which has been gradually developed during the last forty years, and which has now become so far perfected as to be a great safeguard in preventing serious loss of human life, *though it does not in the very slightest degree attempt to improve the local conditions as to climate and soil-moisture, except where irrigation is practicable in areas lying lower than the beds of the great rivers at the points where these can be utilised as sources of water-supply.*

Almost immediately thereafter the great famine on the eastern side of the peninsula was followed by another equally severe famine on the western side, affecting 296,000 square miles with a population of 44,500,000, and centring in Ajmer and Rajputana, also a land-locked area. It was during this famine that Sir William Muir, Lieutenant

Governor of the North-Western Provinces, issued his oft-quoted order that 'every district officer would be held personally responsible that no deaths occurred from starvation which could have been avoided by any exertion or arrangement on his part or that of his subordinates,' in spite of which the mortality was high, owing to the great immigration that took place into British territory from the Native States.

When the next famine broke out, in 1873–4, affecting 54,000 square miles in Bihar with a population of 21,500,000, the vast expenditure of 6,750,000*l.* was incurred in somewhat indiscriminate gratuitous relief. Two years later another Southern Indian famine occurred, in 1876–8, which in its second year included not only Madras, Mysore, Hyderabad, and part of Bombay, but also extended into the Central and the United Provinces and the Punjab, affecting a total area of 257,000 square miles with a population of 58,500,000. Sir Richard Temple was then sent down as Famine Commissioner to assist the Madras Government and to ensure that suitable precautions should be taken against such reckless expenditure as had been incurred in Bihar. Relief administration was much stricter, and a famine wage of one pound of grain plus one anna per man (known as 'the Temple wage') was fixed, but was afterwards found to be insufficient except under favourable conditions. And though these measures cost about 8,000,000*l.*, yet the extra famine mortality in British territory alone was estimated at 5,250,000.

While Madras and Bombay were still suffering from this famine that began in 1876, and then extended to the United Provinces and the Punjab in 1877–8, modern relief policy became definitely outlined by the Secretary of State's declaration in 1877 that 'the object of saving life is undoubtedly paramount to all other considerations. But it is essential that . . . you are bound to adopt precautions . . . similar, so far as the circumstances of India permit, to those with which in this country it has always been found necessary to protect the distribution of public relief from abuse.' This was the key-note struck when the appointment of the first Famine Commission was ordered in the despatch of the 10th of January 1878, 'to collect with the utmost care all information which may assist future administrations in the task of limiting the range or mitigating the intensity of these calamities.'

This first Famine Commission was appointed on the 16th of May 1878, with General (afterwards Sir Richard) Strachey as president; and it submitted its long report on the 31st of July 1880. If there was any previous doubt about the matter, it established beyond further question the fact that all *Indian famines are caused by drought*, and '*that Indian famines are necessarily recurring calamities, against which such precautions as are possible must be taken beforehand, and that it is the duty of the Government to do its utmost in devising some*

means of protecting the country, and to persevere in its attempts till some solution of the problem has been obtained.' It therefore recommended the adoption of 'a definite system of procedure, to be embodied in a famine code,' and urged the importance of improved meteorological observations and the dissemination of the useful information thus obtainable in advance. These recommendations were embodied in a Provisional Famine Code, which was circulated in 1883, and under which Provincial Codes were drawn up for future guidance and action.

Among the questions on which the Commission's opinion was asked was one concerning the influence which the denudation of forests may have upon the rainfall and on the subsequent retention of the rain-water in the soil, and its effect on the permanence of springs or flowing streams. This was, in point of fact, the renewal of a very important question which had been brought before the notice of the Government thirty years previously. In 1846 Dr. Gibson, then acting as Conservator of Forests in Bombay, had pointed out the serious effects that were already ensuing from extensive clearance of woodlands during the previous fifty years. He had, in a letter dated the 9th of March 1846, clearly stated that unrestrained clearances had diminished the fertility of neighbouring gardens and rice-lands, and of the surrounding tracts generally, and that if continued they must necessarily have the disadvantageous effect of considerably increasing the mean annual temperature and the aridity of the climate. As proof of this he showed that since extensive clearances of forest had been made in the South Konkan the people asserted that the springs had dried on the uplands, and that the climate had become much drier, the seasons more uncertain, and the land less fertile. This and other similar representations led the Court of Directors to send out a despatch (No. 21, dated the 7th of July 1847) asking the Government of India to ascertain 'the effect of trees on the climate and productiveness of a country, and the results of extensive clearances of timber.' The Government of India at once took action; but the times were troublous, and only three reports from Madras collectorates were published. These gave valuable evidence about the drying up of springs after forest clearance and the effect of this on water-storage at the base of hills, the rapidity of forest denudation since the introduction of railways, the injurious effects of extensive clearance on climate and soil-fertility, and the assertion of the cultivators in Trichinopoly that where the forests had been cleared the heat and wind were much increased, and that dry cultivation had extended greatly owing to a diminished water-supply in the tanks and wells. Among scientific bodies at home, too, the forestal question in India was arousing serious attention, and in 1851 the British Association appointed a Committee to consider the probable effects, from both economical and physical points of view, of the destruction of forests; and this Committee reported urging forest conservancy and planting operations.

No definite reply was ever officially given to the very important questions raised in that despatch of 1847. But this matter had now again come before the Government of India in Sir Richard Temple's report on the Madras famine of 1877, in which he said—

We cannot but reflect whether the uncertainty of season, which often proves so disastrous in Southern India, is not becoming worse and worse; whether there may not be some physical causes at work to render the rainfall precarious; and whether such causes can be ascertained and obviated. It is hard to conceive a question more practically important than this. The discussion of it would be beyond the scope of this minute. But, connected with it, there is one particular matter which may be mentioned forcibly, though briefly. The Southern Peninsula of India has been or is being denuded not only of its forests but also of its jungles, its groves, its brushwood, its trees. The denudation has been, as I understand, going on near the sources and in the upper courses of the many rivers which water the country. This, perhaps, is being in some degree checked. But with the progress of coffee-planting, and with the assertion of commercial rights on behalf of the people, the utmost vigilance will be needed to keep it within bounds. If it were to proceed unchecked, there would be imminent danger of the rivers running dry. . . . And, as these rivers supply the great canal systems, this danger has only to be mentioned in order to be felt. The same argument applies in a lesser degree to the tanks or lakes, which are second only to the canals in usefulness for irrigation. It has already been seen how precarious is the question of these reservoirs, even with one year's drought. . . . In the midst of cultivated tracts there are to be seen bare, sterile hill-sides said to have been forest-clad within living memory. In such localities the climate is supposed to have been changed for the worse. Beyond the ghât mountains, in Bellary and Kurnool, the treeless, shrubless aspect of the country is as wonderful as it is melancholy. These are the very districts where famine has been occasionally epidemic and where scarcity has been almost endemic.

This subject was therefore referred to the Famine Commission in 1878, and the results of their investigations are contained in three pages (177–9) dealing with 'Forest Conservancy' (*Report*, part ii. chap. vi. sect. ii.), which may be summarised as follows so far as they bear on the particular points at issue :—

1. . . . Whether the presence or absence of forests has any direct effect on precipitating rain is a much disputed point, which we shall not attempt to decide; but there is before us a great amount of evidence from all parts of India that the destruction of forests is believed to have acted injuriously by allowing the rain waters to run off too rapidly. They descend from the hill-sides in furious torrents, which carry down the soil, cause landslips, and form sandy deposits in the plains, so that the surface drainage, which, if gently and evenly distributed over an absorbent soil protected by vegetation, should furnish a perennial supply of fertilising springs, passes rapidly away, and the streams into which it collects quickly cease to flow, after causing mischief instead of good. . . .

2. The action of the State, which certainly was too long deferred, has everywhere been much hampered. . . .

7. . . . but the Indian Forest Act of 1878 has at length given the Executive ample powers to arrest further waste and denudation, and to administer the forest resources to the greatest public advantage.

9. . . . *We think it probable that some of the least productive tracts now under the plough might be managed with greater benefit to the community as protected forest for village uses than as arable land.*

10. So far as any immediate advantage is to be sought from the extension of forest in respect to protection against drought, it will, in our opinion, be mainly in the direction of the judicious inclosure and protection of tracts . . . from which improved and more certain pasture may be secured for the cattle of the vicinity, a supply of firewood secured which may lead to a more general utilisation of animal manure for agriculture, and a possible addition made to the power of the subsoil to retain its moisture, and to the prospect of maintaining the supply of water in the wells. . . . As to the protection of the higher hill-slopes from denudation, it may confidently be stated that they will, in any case, be more useful if kept clothed with wood than subjected to the wasteful and destructive process by which they are brought under partial and temporary cultivation, and that, whether the expectation of an improved water supply as a consequence of such protection is fully realised or not, there is on other grounds sufficient reason for arranging for the conservation of such tracts where it is practicable.

In the main portion of the Commission's report, however, no reference whatever was made to forests, and the Forest Department is not even mentioned in that part of it (par. 120) which urges the 'co-operation of all departments . . . apart from demands arising in relation to direct measures of relief.'

Further light was thrown on this most important subject when Dr. J. A. Voelcker, consulting chemist to the Royal Agricultural Society, was sent out in 1892 to study and advise on agricultural matters, and embodied his opinions in a *Report on the Improvement of Indian Agriculture*, 1893. In the chapters dealing with 'Climate' and 'Wood' he made very valuable observations concerning the relation between agriculture and forests; and he gave proper appreciation to the work of the Forest Department, which was even then still accursed in the eyes of many district officers. With regard to woodlands he said—

38. . . . I would point out that their real influence and value consist in their *lowering the temperature*, and thus causing moisture to be deposited where it would otherwise pass on. . . . Thus, a given quantity of rain will be distributed over a greater number of days, and its value to the agriculturist will be thereby largely increased. . . . Though immense tracts of country have been denuded in the past there are still considerable areas which can be taken up and rendered serviceable for climatic ends, and the Forest Department has stepped in none too early in the endeavour to save those wooded tracts which are still left. From climatic considerations alone the work of the Forest Department is, accordingly, of importance. . . .

180. *Having instanced sufficiently the need of more firewood for agricultural purposes, I must now express my concurrence with the views that have been expressed both by Governments and by individuals, that the way in which the supply of wood to agriculture can be best increased is by the creation of new enclosures for the purpose of growing wood, scrub jungle, and grass.* Such enclosures are now denominated 'Fuel and Fodder Reserves.'

182. The question was often asked by me, why the Forest Department has not created more 'Fuel and Fodder Reserves' . . . Undoubtedly progress is hampered by an insufficient staff, but I consider this important question must not be longer delayed.

197. *Such 'reserves' should be primarily adapted to serve agricultural ends.*

There is a considerable amount of land which might be taken up for this purpose, in others land must be purchased. The results must not be gauged by financial considerations alone, but by the benefits conferred on the agricultural population, the keeping up of the soil's fertility, and the maintaining of the Land Revenue to the State. Enquiry is needed in order to ascertain exactly what the requirements of each district are in respect of fuel, &c., and how these may be met. Continued encouragement should be given to the spread of Arboriculture. *The Forest Department is certainly undermanned, and the present financial check placed upon its further development in an agricultural direction should be removed.*

The first-fruits of Dr. Voelcker's report appeared in a Government of India resolution in October 1894, when it was formally declared that '*the sole object with which State forests are administered is the public benefit*'; and this has been the policy adopted since then. Very soon thereafter a striking example of the direct utility of forests in providing edible roots and fruits and fuel for the relief of the labouring poor, and of the advantages obtainable in granting them free collection of grass for their starving cattle, occurred in 1894 during serious scarcity in parts of the Central Provinces. 'Nothing that was done for the relief of the people,' the resolution thereon stated, 'is said to have been more appreciated than the concession made in this respect.'

The first severe test to which the Famine Codes were put came in 1896. In the Bundelkhand district of the United Provinces the summer rainfall of 1895 was scanty and the winter rains failed, and relief works were begun early in 1896. The monsoon of 1896 was also weak, and famine soon spread over between a quarter and one-third of all India. The whole of Central India was famine-stricken, together with parts of Madras, Bombay, the Punjab, Bengal, and Upper Burma, the afflicted areas aggregating about 307,000 square miles with a total population of 69,500,000, of whom 4,000,000 had to be given relief whilst the famine was at its height. Never before had famine relief operations been so extensive. Over 820,000,000 units received relief, at a cost of nearly 6,000,000*l.*, besides large remissions of revenue and loans afterwards made for the purchase of plough cattle. But in British districts alone the famine mortality was about 750,000 before the autumn harvest of 1897 ended the general distress, which was followed by an exceptionally heavy death-rate from fever and other epidemic diseases always following in the wake of famine.

As soon as this great distress was ended a second Famine Commission, of which Sir James Lyall was president, was appointed on the 23rd of December 1897, to examine and compare the various systems of relief adopted locally and the results attained, and 'to make any enquiries and record any recommendations or opinions which it is thought will prove useful in the case of future famines.' Under the Provincial Famine Codes special arrangements had been made for the withdrawal of restrictions tending to exclude persons in distress from the full benefits of the natural products of the Reserve Forests or waste lands containing an important supply of edible produce

and also for the protection of cattle, when the pasture was about to fail, by sending them to the nearest Reserves that could be opened and by supplying them with fodder and water on the way there. The only direct mention made of the forests in this Commission's report, dated the 20th of October 1898, is with regard to Bombay, where—

141. The operations undertaken by the Forest Department, with the object of supplying the distressed districts with grass, cut and compressed in the more favoured parts of the presidency, constituted an important departure from the prescriptions of the local famine code, which are confined to measures for throwing open the forests for free grazing and the collection of edible products. Effect was given to these measures both in the distressed tracts and in adjoining districts. But in the distressed areas the drought affected equally the forests, and the agriculturists refused to send their cattle to distant forests. The fodder operations involved a net loss . . . . but it is claimed that many valuable cattle have thereby been kept alive, and that the results of the experiment will be of great use in future droughts.

Similar evidence had just before then been published in the Madras Relief Fund Committee's report for 1897 (vol. ii. p. 373).

The solution which promised the best hopes of success . . . consisted in throwing open to free grazing all the forests in the Ceded districts . . . [*i.e.* of the Deccan, where the cattle numbered about three million, and where the forest area exceeded 3,810,000 acres, much of which was, owing to its altitude, exempt from the parched condition of the plains and lower hills] . . . The proposal was . . . to induce the ryots to club their cattle into herds under appointed drovers, who should take the cattle into the reserves under the supervision of Revenue inspectors, and keep them there till better times came. This plan was in accordance with old native custom, and is believed to be by far the best. Under a sky of brass a wind like scorching fire was sweeping over the Deccan, and the fate of its cattle—all but the large stall-fed bullocks of the richer ryots—depended upon the promptitude with which the herds were rescued. . . . The second requisite was the opening of every forest reserve for free grazing. These reserves cover an area . . . capable of carrying a million head of cattle. . . . All the ordinary herds could be driven to these reserves. . . . The reserves were at last all opened towards the end of May. And nearly 700,000 head of cattle benefited thereby.[1]

Hardly had the Commission reported, however, before another and even a more widespread and serious famine broke out. Beginning in Ajmer in 1898, it spread all around in 1899, affecting an area of 475,000 square miles and a population of 59,500,000, of whom 6,500,000 were receiving relief in July 1900, while the total number of units relieved exceeded 1140 millions. It was at once the most widespread and the most terrible famine that had ever occurred in India, and over 7,000,000*l.* were spent in Government relief measures.

To inquire into this a third Famine Commission was appointed on the 20th of December 1900, with Sir Antony MacDonnell as president. So far as forests were concerned, its report, dated the 8th of May 1901, drew serious attention to the exceptionally high mortality of far over four million cattle which had been a marked feature of this famine.

[1] *Madras Famine Report*, 1898, vol. i. p. 87.

205. The great mortality of cattle in the recent famine has pushed to the front the question of their preservation in times of drought and dearth of fodder. Such fodder famines are fortunately rare. In an ordinary famine, when the crops fail at a late stage of their growth, there usually remain sufficient straw and grass to save, at any rate, the useful cattle; but the recent famine has been abnormal in this respect. It is estimated that nearly two million cattle, local and immigrant combined, died in the Central Provinces and its Feudatory States, and that an equal number died in Bombay. The mortality was also great in Berar and in Ajmer, in which latter district no effective measures were taken to prevent it. . . . In their efforts to save their cattle the Gujarat agriculturists expended all their savings, themselves enduring great privations; they sold their jewels and even the doors and rafters of their houses, we are told, in order to purchase fodder. Their efforts failed, their cattle died, and with their cattle all their accumulated wealth disappeared, so that Gujarat became a stricken field.

206. . . . In the Central Provinces, where the conditions were very favourable to success, well considered and sustained action was taken by the authorities. The free cutting of grass was allowed; the means of watering were provided, as far as possible; forests were thrown wholly open to grazing; and grass was given away in large quantities. The province had, in fact, as a whole, more than sufficient fodder for its requirements, and exported large quantities both of grass and *jawâri* straw. And yet the cattle died in immense numbers.

207. . . . In Bombay relief measures were conducted on a scale hitherto unknown . . . but the conditions were such . . . that no efforts . . . could achieve more than a partial success.

Regarding the deportation of cattle to the forests this Commission did not think it advisable to put pressure on the people, as in Gujarat and Berar large numbers of stall-fed cattle thus deported had died on the way, while 'the coarseness of the grass, the change of water, or, again, the scantiness and insufficiency of the water-supply, as well as the neglect of the hirelings in charge, are fatal to carefully reared and stall-fed beasts.' But, they added: '216. We think, nevertheless, that the forests should be opened to all who are prepared to take the risks.'

In the second Famine Commission's report of 1898 there was one very ominous sentence (par. 404): '*Viewed as a whole we consider that . . . the areas over which intense and severe distress prevailed in the famine of* 1896–97 *were greater than in any previous famines.*' And yet the next famine, immediately thereafter, was still more widespread and distressing. Now, this very sad and serious state of affairs is hardly to be wondered at. Ever-widening areas of scarcity must become the rule, unless far more is done than has ever yet been attempted to afforest all waste lands and the poorest classes of agricultural soil, and to plant and manage them solely for the benefit of the surrounding agricultural population and their plough-cattle.

During the fifty years previous to the assumption of government by the Crown there were four famines and four periods of scarcity; and during these last fifty years since then there have been twelve great famines, including the two most extensive and disastrous that have ever occurred, and six periods of serious scarcity. Indeed,

within the last ten years there have been three great famines, and serious scarcity has now become almost an annual occurrence in some part or another; while the famine of 1907–8, that has for over a year been blighting Upper and Central India, has already proved of long duration and great extent. Now, there can be no doubt that the previously existing relations between woodlands and waste jungle-covered tracts on the one hand, and cleared agricultural land on the other, have been greatly disturbed and entirely altered during the last sixty years since the Court of Directors' despatch was sent out in 1847. Whatever beneficial effects extensive wooded or shrub-covered areas can possibly exert on the temperature and the relative humidity of the air, and on the temperature and the amount of moisture retainable within the soil, the sum total of such benefits must necessarily have become greatly diminished through the vast clearances made for permanent and temporary cultivation under British rule during many years of peaceful occupation and of rapidly increasing population, railway development, and trade. During the last fifty years under Crown government the agricultural situation in high-lying tracts has, despite the benefits of extensive irrigation in tracts lying lower than where the great river-courses can be tapped, become aggravated by an increase in population certainly exceeding 60,000,000 and probably amounting to 80 or 100,000,000 souls, and by correspondingly vast clearances of lands formerly covered with trees or shrubs; and these clearances for cultivation must inevitably have simultaneously decreased the capacity of the soil for retaining moisture and increased the actual aridity of both the soil and the atmosphere. So far, therefore, as any sort of opinion is justifiable in default of a careful scientific enquiry it may be presumed that these extensive clearances of woodlands and the pressure of a population of 300,000,000 now requiring to be supported must inevitably have tended both to induce and to prolong the now more frequently recurring periods of scarcity, and also to increase the danger of scarcity becoming famine.

Although the Reserved and Protected Forests amount to nearly 25 per cent. of the total area of India, yet the percentage of their distribution varies enormously (Burma 75, Assam 45, Central Provinces and Berar 21, Madras 13½, Bombay 12, Bengal and Punjab 9, United Provinces 4, Baluchistan and North-West Frontier 2); and this means that in the hottest and driest parts and in the most densely populated provinces, where woodlands and scrub jungles would afford the greatest benefits to agriculturists and their cattle, the forests now exist only in an inverse proportion to the need for them.

I have before touched incidentally on this matter in an article on 'The Forests of India' (see this Review, February 1907), but I would here plead for more attention, a more specialised scientific and especially botanical enquiry, and more money being devoted both to the consideration of and also to actual experiments connected with the

question as to whether or not the Government cannot do something to relieve the situation by (1) afforesting all still existing waste lands and also acquiring many of the lowest grade cultivated lands, which are the first to become affected by and the last to recover from the effects of drought, and (2) by endeavouring so to plant or sow them with any sort of trees, bushes, coarse grasses, or even desert plants as can possibly be made to grow there.

Thirty years ago the Secretary of State (despatch of the 10th of January 1878, par. 9) said: 'It is of still more essential importance to ascertain how far it is possible for Government, by its action, to diminish the severity of famines, or to place the people in a better condition for enduring them.' Never yet, however, has science been properly asked, except to a partial extent through Dr. Voelcker in 1892, to aid in ameliorating in such manner the lot of the patient agriculturist and of his dumb, helpless cattle. The Famine Commissions of 1898 and 1901 were enquiries by practical administrators, and only considered forests as the means of possibly providing edible roots and fruits, and grazing for cattle in time of scarcity. And the Indian Irrigation Commission of 1901–03 did not investigate the influence of forests on rainfall and water-storage. Nor is the Agricultural Department in a proper position to make the searching investigation and the authoritative recommendations that seem called for.

I would emphasise what Dr. Voelcker said in 1893 (*op. cit.* p. 159):—

> It is very clear, from the instances I have given, that there is a good deal of land on which 'fuel and fodder reserves' might be formed, and if only systematic enquiry be made it will result in showing . . . that there is very much more land available than has been stated. In almost every district [in the North-West Provinces] there are uncultivated spots among existing cultivation which would grow *babul* or similar wood perfectly well.

And, in addition to trees, bushes, and grasses indigenous to India, experiments should also be made with the flora of the drier tropical and sub-tropical parts of Africa, America, Australia. Here science can and should aid India, and it rests with Government to take the necessary steps to obtain such assistance. The results would, of course, not be of immediate benefit; but the necessities of future generations call for the immediate commencement of experiments to try and ameliorate even to a small extent the existing precarious conditions.

Far be it from my intention to say anything that may be taken to imply that little or nothing has been done in the directions indicated by Dr. Voelcker (see p. 155); but I do urge that nothing adequate has yet been done, and that much has been left undone which might well find even its financial justification in the splendid and ever-increasing annual revenue accruing from the work of the Indian Forest Department. Even now there are great possibilities of doing much good in this direction. The uncultivated areas are still in many

parts very extensive, and these waste lands receive little or no attention from Government. And although the Forest Department was considerably strengthened in 1907, yet it is still undermanned considering all the extra work it ought to be called upon to do in the interests of Indian agriculture, and of the patient, uncomplaining millions engaged in the toilsome and exceedingly precarious cultivation of the soil throughout by far the greater portion of our Indian Empire.

Even in Burma, the best wooded and one of the best watered of all the provinces, with its 75 per cent. of woodlands and its thin population, the results of disturbance of the water-supply have already been recently felt so strongly as to have necessitated active measures being taken to restrict and regulate hill clearances. And if that be the case there, then it is certain that the other parts of India need measures going very much further.

No Secretary of State for India could be more sympathetic than Lord Morley or more willing to consider informal representations made regarding matters concerning the welfare of Indian agriculture. After his famous first budget speech on the 20th of July 1906, in which he highly eulogised the work of the Forest Department, his attention was drawn to the fact that no proper reply had ever been given to the despatch of 1847, and that possibly such an enquiry as would now be necessary to probe this economic sore to the bottom may probably show that the afforestation and improvement of waste tracts for the partial amelioration of agricultural conditions in future might well be considered a fit object towards which to devote a fair share of the splendid surplus annually accruing to the provinicial and imperial treasures from the forests of India. Preliminary action has already been taken in so far that a circular has been issued by the Government of India calling upon the Provincial Governments to enquire and report upon the influence of woodlands and scrub-covered jungles on climate, soil-moisture, water-storage, and agriculture. And simultaneously therewith, in *Notes on the Influence of Forests on the Storage and Regulation of the Water Supply* (Forest Bulletin No. 9, August 1906), Mr. Eardley Wilmot, Inspector-General of Forests, has touched on this matter as regards some of the drier parts of India. But he could not possibly deal fully with the subject, and what is needed is a thorough scientific enquiry.

When these reports are published they will form the first full and complete official answer to the question asked by the Court of Directors in 1847. But they will then only be merely a preliminary enquiry; for it is not to administrative and executive officers, but to scientific specialists that Government must look for that particular kind of aid that Indian agriculture has long stood so much in need of.

J. NISBET.

THE UNREST OF INSECURITY

THE man in the street, the man in his club, and the lady in her boudoir are asking what it is all about.

They want to know what is the meaning of all these leagues and associations which are being formed and supported by men of various shades of political opinion and in various walks of life; all purporting to have for their object the awakening of the country to a sense of its insecurity; and all prescribing their own special schemes for national defence; without which we are told that we are now—as a nation—dangerously insecure, and liable to some great national catastrophe which may cost us untold miseries and humiliations, with the probable loss of our freedom and independence.

What does it all mean?

Are these men who support these leagues and associations all cranks and nervous alarmists?

Or are they vulgar practical jokers, trying to 'get a rise' out of their fellow-country-men and women (for the women have just as much interest in this matter as the men)? Or, finally, are they for the most part level-headed Englishmen, who, having given some thought to the course of the history which we are now 'making,' have reluctantly come to the conclusion that our ancient weapons of defence have become rusty and obsolete, and that it behoves us to adopt new ones, and that speedily, while the day of grace is still ours?

We have the 'Navy League,' in fact we have two navy leagues: the original one, and the revolted branch, which has assumed the title of the 'Imperial Maritime League.' Both of them working towards the same goal, though by different methods. Both of them strenuously urging their fellow-countrymen to maintain at all costs an indisputable naval supremacy over all our rivals, either singly or in any probable combination against us.

Then we have the 'National Defence Association,' containing, amongst others, such distinguished names on its committee as those of Lord Roberts, the Duke of Bedford, Sir Vincent Caillard, Lord

Castlereagh, M.P., the Earl of Dundonald, the Earl of Erroll, the Right Honourable Walter Long, M.P., and many others.

This Association holds periodical meetings, and discusses such important national subjects as 'The blue-water school,' 'The problem of invasion,' 'The citizen's duty in defence,' 'The state of the Navy,' 'The defence of India,' 'The county associations and their work,' &c., &c.

Then we have the 'National Service League,' headed by our veteran soldier Lord Roberts.

This association, which bears on its roll fifty-two admirals besides a very large number of generals and colonels, shows thereby that even professional seamen who have spent all the best years of their lives in the Royal Navy and might be expected to belong entirely to the 'blue-water school,' are yet so firmly convinced that the country cannot be defended by the Navy alone that they spend their time, their energies, and their money in striving to awaken their countrymen to the danger they incur by entrusting—as they do now—the defence of the British Empire entirely to the Navy, without an adequate Army to back it up.

It is probably known to most of our readers that the National Service League was formed a few years ago for the purpose of advocating the compulsory military training of all able-bodied young men in these islands, for the purpose of home defence. The general idea being that it would be very good for the young men themselves (irrespective of the feeling of security which it would produce in the country) if every British youth of sound physique and ordinary brain-power were put through a short course of military training and rifle shooting, as the logical complement of compulsory education in 'book-learning.' That it would be at least as good for the wealthy and so-called 'idle' classes of the community as for the industrial and working classes. That, in short, it having already been proved in free and democratic Switzerland that universal military training for home defence is highly beneficial, both to the individual and to the country, there is no reason to suppose that it will not be equally beneficial in free and democratic England. And, further, that so far from universal military training being likely to produce a spirit of aggression and jingoism, exactly the opposite sentiments will probably be developed; and when every family knows it may have to put one or more of its members into the fighting line, that knowledge will have a sobering effect upon the nation and prevent further exhibitions of that music-hall patriotism which has on more than one occasion detracted seriously from our reputation for dignified self-control and British coolness, showing us to our neighbours more in the guise of some of those Southern races whose demonstrative excitability we have always affected to despise.

The case was admirably put by Lord Roberts when he said:

> I wish I could make it clear to my fellow-countrymen that the universal obligation to share in the national defence is the surest guarantee against a spirit of wanton aggression and that kind of irresponsible jingoism which shouts for war on the slightest provocation, the shouter knowing full well that he will not have to risk his own skin.

Those who are opposed to anything in the shape of compulsion for military training ask those who advocate it to show the necessity for it at this particular juncture in our national life. The request, at first sight, sounds reasonable, as it is not usual to make fundamental changes in long-established institutions without good cause shown for doing so. Yet in the present case it is not possible, and never will be possible, to show the 'necessity' for the change advocated until after some terrible national catastrophe has happened; and then, of course, it will be too late. But it is submitted that even if we 'muddle through' our next war with our present antiquated system of patriotism by proxy, it will not prove that we could not have done better and cheaper had the manhood of the nation been trained to arms; nor will it prove either that such universal training is not a 'necessity' for the safety and independence of the country in the near future.

But although it may not be possible to demonstrate the 'necessity' beforehand in the same way that we prove a proposition in Euclid, it is surely reasonable and wise to deal with such an important subject as national security in accordance with the probabilities arising out of the international situation which we have to deal with.

Men insure their houses and their goods not only against what might be called the 'probabilities' of fire, but against the 'possibility' of loss by such a catastrophe as the burning down of their houses or stores. Is not such a precaution equally incumbent upon a very rich and much-envied nation, or, rather, world-wide Empire?

'True,' say our critics; 'but we *are* insured: our all-powerful Navy is our insurance, and if that should suffer defeat, all the home armies of millions of trained men that we could possibly muster would not save the country, as we could be starved into submission in a few months; for our food supplies would be cut off directly our Navy was defeated.'

'True also,' replies the National Service League; 'but your Empire can be destroyed *without* the defeat of the British Navy; and if during some future great European war you tie your Navy to the shores of these islands, and never allow the bulk of your battle squadrons to be more than forty-eight hours' sail from the North Sea (as certainly will be the case under approaching conditions), you will lose your Empire.'

It is confidently submitted to the mature judgment of the readers of this Review that it is the duty of the manhood of the nation to be

ready to defend their country from invasion; and if we are too short-sighted, or too misguided by silly sentiment, to insist that our young men shall prepare themselves for this duty while the day of grace still lasts, our Navy will be paralysed from the day that war breaks out or becomes imminent.

That there should be any question of the invasion of these islands is humiliating in the last degree, and absolutely inconsistent with our proud boast of being the greatest Empire that the world has ever seen.

Wherein lies the wisdom of boasting that we own a fifth part of the habitable globe, and that three or four hundred millions of men and women of various shades of colour are subject to our Imperial but beneficent rule, whilst all our neighbours are well aware that if we were to find ourselves at war to-morrow with an ambitious rival across the North Sea we should stand trembling in our shoes, in fear of a successful invasion of these two little islands—the heart of the Empire?

And why? Simply because we continue, as a nation, to hold such a distorted view of that much-abused word 'freedom' that we place the freedom of the individual on a higher level of sanctity than the freedom of the State. Thus deliberately neglecting to make due provision for carrying out the first law of nature—self-preservation—*as a State*!

In other words, whilst we compel the rising generation of lads and lasses to receive education of a more or less useful kind, whether they like it or not, on the broad principle that it makes of them useful citizens, we totally neglect to complete the education of the lads by instructing them in the most useful and most important of all duties—the duty of preparing themselves to defend their country; with the result that just nine-tenths of them shirk this duty altogether, to their own loss, both physically and morally, and to the ever-increasing danger of the land they live in.

The precious freedom of the British hobbledehoy is so sacrosanct that it is considered to be wiser and more patriotic to allow him to follow his own sweet will; to shirk his most obvious duty to his country in order that he may have plenty of time to follow his own private business or pleasure; to smoke his pipe at a football match (not to play that or any other manly game, but merely to look on and applaud); to slouch about at street corners and the precincts of public-houses; and to brag about his liberty as a free-born Briton.

Many deeds of crime and folly have been committed in the sacred name of liberty, though perhaps none more foolish, none more short-sighted or more dangerous to the future of the integrity and independence of these islands, than that folly which we are now committing in its name by allowing nine-tenths of our lads to grow up into manhood without instructing them and preparing them to assume when

necessary, and qualifying them to undertake, the most obvious and most sacred duty of defending the land they live in and call their own: whose institutions they profess to be proud of, whose laws they are always ready to invoke for their own protection or advantage, but whose liberty and inviolability from foreign aggression they are not ready to defend. In short, they claim their 'rights' without acknowledging their duties and their obligations, and they are quietly allowed to do so by the law of the land. What a travesty of the word 'liberty'!

Great Britain and the United States of America are generally supposed to be the two most peace-loving nations on earth, and they have every reason to be so. They are both of them rich, and they both have (practically speaking) as much territory as they want; at any rate, as much as they can comfortably manage. They desire therefore the *status quo*: to be left alone by their neighbours to enjoy their inheritances in peace. The United States, from their geographical position, are, for the present at any rate, relieved from all fear of foreign aggression. They are safe from outside attack, and the only national troubles which could possibly overtake them must hence arise from internal dissensions and disruption. A great national army would not protect them against this danger; in fact, might have exactly the opposite tendency.

The case of Great Britain is different, and there is no rational comparison between the two countries in this respect. The British Empire, from its geographical position, is more open to attack than the territories of any other nation on earth. It is rich and prosperous, and naturally excites the envy of its neighbours. Its foundation is upon the sea—an unstable element—and not only the defeat but even the partial paralysis of the British Navy would bring the Empire tumbling down like a house of cards.

This paralysis will certainly take place if we have not sufficient land forces to protect these islands from invasion at the time that Germany issues her challenge. That she will challenge us as soon as she is ready and sees a good opportunity there can be no reasonable doubt; in fact, we have had fair warning to that effect—'Germany's future is on the ocean,' 'The twentieth century belongs to Germany,' 'We must have a navy of such strength that the strongest navy in the world will hesitate to try conclusions with it,' &c., &c.

Germany will be perfectly justified in challenging us. She is now desirous of doing, and has a perfect right to do, what we ourselves have been doing for the last two hundred years. That is to say, engaging in that operation euphemistically known as 'expansion.' We have, practically speaking, come to the end of our expansion, as previously noted; but it is well to remember that some of the lands which we 'expanded' into were not waste and unoccupied lands. In fact, many of them were very thickly peopled; but this fact did not

hinder us from annexing them. It never does when nations think they are strong enough to take something they want; and they can always find some more or less plausible excuse for doing so—'Peaceable penetration,' 'The advancement of Christianity,' 'The benefits of civilisation and commerce,' 'The abolition of slavery,' 'The necessary compensation and salutary punishment for the murder of an explorer or a missionary.' Any of these is quite sufficient excuse for the annexation of a tract of country, always provided that you are strong enough and that your jealous neighbours will not object and interfere with you.

There are, no doubt, many excellent, honest, amiable, and thoroughly sincere public men in this country who firmly believe that we shall be able to avoid war in the future, if we are only sufficiently conciliatory, courteous, and perhaps yielding towards all our neighbours. There are many such men in our present Parliament, engaged in making laws for the government of this great Empire and in voting or hindering supplies for the naval and military services, which are maintained for its defence. These excellent people—'men of peace,' as they call themselves—are endeavouring to persuade their fellow-countrymen that if we could only bring about some international agreement for the limitation of armaments war would become less likely, and might perhaps be eventually abolished altogether. They preach the exact opposite to the well-known maxim '*Si vis pacem para bellum*,' and they tell us that if we wish for peace we must *not* be prepared for war. They go even further than this, and, with the view of carrying out their theories, they suggest—and try to enforce—that Great Britain should set the example by reducing her expenditure on the warlike services. And they even venture to prophesy (like Cobden did about Free Trade) that our neighbours will speedily follow our example.

The proposal seems to be somewhat rash, and the assumption that our neighbours will follow our example even rasher. We may search all history in vain to find any warrant for assuming that a rich, prosperous, and essentially commercial nation rendered itself immune from attack by reducing its armaments for defence. Moreover, our neighbours have good reason for doubting our sincerity in this matter when they hear a responsible Minister declaring in the same breath that he has reduced expenditure on one of the warlike services and at the same time added to its efficiency by means of wiser administration of its resources. This statement was naturally regarded abroad as a piece of insincerity—not to say hypocrisy. In this country it was understood as a rather clever method of squaring two opposite schools of thought in the right honourable member's constituency, one of which desired efficiency first and economy second, and the other economy first and efficiency second, and of thus redeeming some glib election pledges.

The two Peace Conferences at The Hague raised hopes in the breasts of a few enthusiasts which have been somewhat rudely dashed to the ground. 'Peace Conferences' they were called, though as a matter of fact they were war conferences. They did nothing whatever to bring universal and perpetual peace one day nearer to the nations wishing for it. The later conference did something, though very little, to settle some of the so-called practices of war; but in so doing it brought to light and accentuated in an alarming degree some of the opposing and quite irreconcilable interests of those nations which are now struggling for naval supremacy.

Our recognised peace apostles abused the British delegates at The Hague in unmeasured terms. The latter were alluded to as incompetent blunderers who had totally disappointed the hopes of their country, and had done nothing whatever to further the cause of peace.

The latter accusation is undoubtedly true; but it would seem to be about as reasonable to charge our greatest mathematicians with incompetence because they have failed to square the circle as to find fault with Sir Edward Fry and his colleagues because they have failed to alter human nature by a display of their persuasive eloquence.

Far wiser, far deeper in thought, far more practical in their conclusions, are the comments of the Chinese Ambassador at the Hague Conference. They are so direct, so honestly free from all cant and make-believe, so quiet yet so earnest in their evident object as an exhortation to his country (the oldest civilisation on earth) to wake up and adopt new methods for its defence, that they will become quite classical as a contribution to the discussions on the subject of universal peace; and a few of them are well worth quoting here.

After pointing out that while at the first Hague Conference twenty-six independent nations were represented, forty-five sent delegates to the second, his Excellency Chien-Hsün proceeds:

> In most cases the leading representatives were either statesmen or lawyers, with naval or military experts to assist them. In no case were their arguments and representations trivial in character, and each and all did his best to advance his nation's interest; but, inasmuch as nations differ in status and power, proposals made by one nation would not commend themselves to another, and heated arguments would follow, moving the whole assembly to excitement, each representative insisting on his nation's sovereign rights, and with the result that the proposal would be dropped half way, or suspended in a void of empty theories.

What a delightfully honest description of a Peace Conference! Chien-Hsün then goes on to say:

> The first conference was nominally intended to effect the limitation of armaments, and on this occasion England made this her main suggestion, but on proceeding to discuss it the members of the conference could not refrain from smiling; for, when every Power is competing to the uttermost, which of them is likely voluntarily to impose checks upon its own martial ardour?

Which of them indeed ?—with the single exception of England, who seems to be fairly on the road to being taken in by the old-fashioned and oft-exposed confidence trick: stinting and saving money on her defensive services in order that she may be able to pauperise her working classes.

His Excellency further reports to the 'Son of Heaven' that—

> It was expressly declared, in addition, that Great Britain, Germany, France, America, Italy, Austria, Japan, and Russia are the eight Great Powers, which plainly indicated that all other nations are to be regarded as small Powers.

And he proceeds to give considerable point to this remark by adding a little further on that—

> The Great Powers naturally availed themselves of their power to benefit themselves by coercing others on the pretext of law. When they wished to carry some proposal they tried to sway the assembly by an oratorical appeal to each other, and when they wished to defeat a proposal they secretly exercised methods of obstruction to promote disagreement.

This last is a somewhat grave indictment against the Peace delegates, and we can only hope that the Chinese Ambassador is exaggerating, or, at any rate, adding a little more gall than necessary to his remarks, in order to emphasise his disappointment at not being included amongst the representatives of the 'Great' Powers. For if there is any truth in what he says, it constitutes a scathing criticism of those gentlemen who went to The Hague with peace upon their lips, but envy, hatred, and malice in their hearts.

There is something quite pathetic in the expression of Chien-Hsün's concluding remarks, when speaking of his own country. He says:

> If she could at the next conference win a position among the Great Powers such as that which Japan holds at the present day, what an unspeakable blessing it would be for our country! But the time soon passes by, and the consequences involved are very great.

China gave up militarism some centuries ago, and public opinion in the Celestial Empire has since then despised the military art, and treated the soldier and all connected with his calling as debasing and degrading and only worthy of the contempt of a highly civilised race.

Perhaps China was right—theoretically; but it did not work out in practice, and, unable to defend herself and her territories by force of arms, she has been fleeced, bled, insulted, and forced to submit to the most humiliating conditions of the foreign intruder ever since she came in contact with more warlike nations.

There are many indications which show that this great and sleepy Empire, secure in her isolation until quite lately, is at last beginning to wake up to the idea that perhaps practice is better than theory in the affairs of nations; and there is a store of worldly wisdom in the concluding remarks of the Chinese delegate at The Hague, quoted above, to the effect that if China could only become like Japan (*i.e.* a

warlike nation) 'what an unspeakable blessing it would be for our country!'

The disciples of Confucius may still have to recognise, and act upon, that most profound and fundamental truth of history—that the warlike races inherit the earth.

The present position of Great Britain may be briefly summed up as follows: She has not had to fight for her life for more than a century (1805).[1] The safety of these islands having been assured since that date by the maintenance of an all-powerful Navy, the warlike qualities of the British race—those qualities which made of us a *Great* Power and founded the Empire—have steadily deteriorated. A fair warning of this deterioration has been given to us by the disclosure of our military impotence during the Crimean and Boer wars. It is true that our small professional Army maintained its reputation for discipline, devotion to duty, and individual acts of personal valour, of which any army might well be proud; but the military impotence of the nation—as a nation—stood revealed to all the world. And at the conclusion of both those wars the martial power of Britain stood at a far lower level amongst the nations than it did at the conclusion of the Napoleonic wars.

Riches, ease, inordinate luxury, and devotion to amusement and trivial gossip in one class; the race to be rich, the absorbing devotion to commercialism and money-making in another class; the jealousy, the discontent, the unrest and the struggle to secure for themselves, by fair means or foul, a larger share of the wealth produced by the combination of capital and labour in a third class; and the misery, hopelessness, and consequent recklessness and despair of yet a fourth class of our population, have effectually undermined, if not destroyed, those warlike and heroic qualities of the Anglo-Saxon race which brought us into power, prosperity, and opulence.

This dauntless and heroic spirit—the foundation of all great nations, including America—appears to have passed on, for the present, to Germany and Japan; and our Teuton relations have calmly and confidently told us that it is now their turn, and that, in accordance with that indisputable law of the survival of the fittest, they intend to take our place in the world as the leading commercial and maritime Power of Europe. And Japan is obviously preparing herself on the same foundation—the foundation of military and naval power—to assume the commercial and maritime hegemony of Asia.

And what are we doing by way of preparation for holding our own in the world?

Well, we have just reduced our very small regular Army by 21,700 men. We have put our *ir*regular Army (Militia and Volunteers) into the melting-pot, and it is not quite certain what will come out of it;

[1] It has been truly said that we fought for our lives at Trafalgar, and for the establishment of the peace of Europe at Waterloo. Napoleon gave up all idea of the invasion of England after the defeat of the combined fleets at Trafalgar.

though there are already rumours that large numbers of Volunteers are resigning, as they naturally decline to give more of their time and trouble towards acquiring increased military efficiency (as they are now being asked to do by Mr. Haldane) whilst they see nine-tenths of their able-bodied comrades skulking and flatly refusing to do anything at all.

With regard to our Navy, we have virtually given up the two-Power standard, and the annual output of battleships which was quite recently announced by the Board of Admiralty as the 'irreducible minimum consistent with safety' has been reduced to less than half; and yet the naval members of the Board have not resigned their offices. Party and place before consistency and national safety.

On the 2nd of March a motion was brought forward in the House of Commons for a still further reduction in our armaments, and, notwithstanding that it was rejected by a large majority, the speeches of Ministers were obviously in sympathy with it. Mr. Asquith told the House and the country that 'We on our side had no reason to view with suspicion or apprehension any naval expansion there [in Germany] or elsewhere, which should simply correspond to the economic needs of the country,' &c., &c.

But the so-called 'economic needs of the country' consist of a sustained national effort to take their place in the world as a leading maritime commercial Power; about which no secret is being made, but preliminary to which the astute Germans are perfectly well aware that it will be necessary for them to build a navy of such strength that, concentrated in the North Sea, as it will be, and supported by a numerous and well-equipped torpedo flotilla, it will be able to wait and watch for an opportunity of taking England at a disadvantage and of striking a swift and deadly blow at the heart of the Empire. This opportunity will, in all human probability, arrive long before the German Navy has acquired equality, or anything approaching to equality, with our Navy, as we have to watch and guard many seas beside the North Sea. In the meantime the Germans are rapidly gaining on us, and their ultimate object has become so obvious to all the world that some of their public men have begun to express alarm lest we should strike before they are ready; but there is not the slightest danger of this. We shall wait until they are quite ready and allow them to choose their own time.

In the same speech above alluded to the present Prime Minister told the country that 'We must safeguard it, not against imaginary dangers, not against bogeys and spectres and ghosts, but we must safeguard it against all contingencies which can reasonably enter into the calculations of statesmen.'

The proposition is indisputable, so far as the wording of it goes. No sane man wishes to guard against anything beyond reasonable contingencies; but a strong difference of opinion at once arises as to what are and are not 'reasonable contingencies'; and it would

certainly help to clear the air if Mr. Asquith were to explain what he means by bogeys, spectres, and ghosts. Invasion is constantly alluded to as a bogey, and in fact that school of optimistic thought to which Mr. Asquith belongs rarely, if ever, alludes to it otherwise. It will not be unfair, then, to assume that invasion is one of the numerous bogeys or ghosts which it is not necessary for us to guard against.

The national dangers to which a country may at any time be liable are always very largely a matter of opinion; and the value of opinions must be assessed in accordance with the position, the knowledge, the experience, and the authority of those giving them.

The great Napoleon did not think the invasion of England impracticable at a time when the British Navy held a far greater superiority over that of France than it is likely to do over that of Germany in ten years' time.

The German General Staff of to-day do not think the invasion of England impracticable, as they have all the plans and the details made out for carrying it into effect, and they are kept well informed and up to date by an admirable system of spies in the shape of German soldiers now serving as waiters (as the Japanese did as barbers at Port Arthur) in all our principal hotels and restaurants.

Many of our leading soldiers, including Lord Roberts, do not look upon the invasion of England in the near future as either a bogey, a spectre, or a ghost; and they ought to know nearly as much about the subject as Mr. Asquith. One of Lord Roberts' latest public statements is as follows:

> I am sure the most important point to bring before the public is the possibility of an invasion. Until they clearly understand that this may some day happen, nothing will induce them to listen to our appeals for a national army. I found this on every occasion I have spoken, and unfortunately none of our leaders nor the Press ever do anything to arouse the people to a sense of our danger from not having a sufficient and efficient land force.

Is Lord Roberts, V.C., with his glorious records of service to his country, to be regarded as a nervous alarmist, easily scared and frightened by bogeys, spectres, and ghosts?

Finally, the fact that fifty-two of our most thoughtful admirals have become members of the National Service League would appear to indicate that even the Navy itself does not believe the country can be defended by the Navy alone.

The 'unrest of insecurity' will continue, and in all probability rapidly increase under approaching conditions, until England not only 'expects' but 'insists' that every man shall do his duty.

C. C. Penrose Fitzgerald,
Admiral.

THE EMPIRE AND ANTHROPOLOGY

SOME twenty years back in the volumes of Mr. Punch may be found a characteristic Du Maurier drawing of a pretty woman interrogating a pompous personage in evening dress.

He says, 'I am—ah—going to the Anthropological Institute.'

'And where do they anthropolodge?' is the smiling question that follows this announcement.

They—the Anthropological Institute of Great Britain and Ireland (at that period)—possibly still 'anthropolodged' in two dark, dirty little rooms in a part of St. Martin's Lane long ago rebuilt.

One could imagine the hitherto untravelled man of science of German, French, Italian, or American nationality who by reading had acquired some fair conception of that stupendous fact—the British Empire over 400,000,000 of human beings, belonging to nearly every known race or species of the human genus—arriving in London, the capital of the Empire, and turning his attention almost first and foremost to the headquarters of anthropology.

He might fairly expect to find that branch of scientific research occupying the whole of the magnificent buildings of the Imperial Institute, or endowed with the Crystal Palace, or the new Victoria and Albert Museum of South Kensington, or some one or other of the Palaces of London. As a matter of fact, he would discover the science of anthropology—the Royal Anthropological Institute of Great Britain and Ireland—established in one and a half rooms on the second floor of No. 3 Hanover Square, where it enjoys the somewhat limited hospitality of the Zoological Society.

If the intelligent foreigner had studied the British Empire sufficiently to have gauged what should have been the immense scope of its Imperial anthropology, he would have learnt enough about our odd way of doing business not to be surprised that we should spend millions of pounds on horse-breeding (half of which is for no other purpose than that of carrying on a pernicious form of gambling), hundreds of thousands, very wisely, on cattle and sheep breeding or less wisely on fancy dogs, and with problematical benefit on the promotion of tariff reform, imperial cricket, sectarian warfare in religion or education; and yet from out of the gigantic wealth in the home country and capital of the Empire only be able to raise

fifteen hundred pounds annually for a science dealing with the bodies and minds of the 400,000,000 living men and women who are passing their lives under the rule of King Edward the Seventh.

The scientific study of anthropology—the science of man, the attempt to understand the bodily and mental conditions of earth's ruler—may be said to have begun in this country at the end of the fifties of the last century, under the direction of Sir Charles Lyell, T. H. Huxley, E. B. Tylor, Sir John Evans, Francis Galton, Colonel Lane-Fox-Pitt-Rivers, Sir John Lubbock, Dr. John Beddoe, Sir A. W. Franks, Sir Edward Brabrook, Dr. Charnock, Sir Richard Burton, Moncure D. Conway, and others. Dr. Prichard had written interestingly but unscientifically on the races of mankind in the pre-Darwinian days of the middle-nineteenth century, when a slavish interpretation of the Hebrew Scriptures still clogged research into the past history and present classification of mankind.[1]

He and others (including, I believe, one of the ablest and most 'modern' of these pioneers in anthropology, the late Edward Norris, Librarian of the Foreign Office) had founded the Ethnological Society about 1843; but, as Professor D. J. Cunningham has recently pointed out,[2] the membership, though distinguished, was and remained very small.

'In those days' (if I may quote the very interesting address recently delivered by Professor Cunningham) 'anthropologists were looked upon with some suspicion. They were regarded as men with advanced ideas—ideas which might possibly prove dangerous to Church and State. In London, as indeed might be expected, no opposition was offered to the formation of the Anthropological Society, but in Paris the first attempt to found a similar Society in 1846 was rendered futile by the intervention of the Government, and when finally, in 1859, the Anthropological Society of Paris was formed, Broca, its illustrious founder, was bound over to keep the discussions within legitimate and orthodox limits, and a police agent attended its sittings for two years to enforce the stipulation. The same fear of anthropology, as a subject endowed with eruptive potentialities, was exhibited in Madrid, where the Society of Anthropology, after a short and chequered career, was suppressed. It is indeed marvellous how, in the comparatively speaking short period which has elapsed, public opinion should have veered round to such an extent that at the present day there is no branch of science which enjoys a greater share of popular favour than anthropology.'

The 'popular favour' to which Professor Cunningham alludes may be accorded [to what should be the first of sciences] in France, Germany, Austria, Spain—Spain has made up for lost time in this respect

[1] It is scarcely necessary to point out that the Churches soon became reconciled to and even enthusiastic supporters of anthropological research. Remove the contributions to anthropology from members of the many Missionary Societies and you knock the bottom out of the science. One of the best periodical Reviews on this subject is *Anthropos*, conducted from Vienna by the Rev. Dr. P. W. Schmidt, and supported by Roman Catholic Missionaries throughout the world. Nor are the clergy of the Church of England, the Presbyterian, Baptist, or Wesleyan Churches in any way behind the Church of Rome in their fifty years' contributions to anthropology.

[2] In his presidential address of January 1908 to the Royal Anthropological Institute.

—Italy, Belgium, and Portugal. But there is little sign of it in Britain or in the British Dominions beyond the Seas. The total membership of the only Anthropological Institute in Great Britain and Ireland—to which the King has recently accorded the title of 'Royal'—scarcely reaches to five hundred. There are, I believe, no anthropological societies in Scotland (except that of Aberdeen) or Ireland, though there may be efficient bodies for dealing with archæology, folklore, and philology. Yet the importance of the detailed study of the existing tribes and races of Scotland and Ireland can hardly be over-estimated both in regard to our reading of history and our understanding of modern political questions.

In 1863 the Anthropological Society was founded in London, apparently to assume a more militant rôle in those eager young days of the new birth of research (revolutionised by Darwin's theories) than had been taken up by the staider Ethnological Society, which was less anxious to *outrager* the clergy of all denominations than the young men filled with the new wine of the evolution thesis.[3] The real difference perhaps between the two was that the ethnologists wished rather to confine themselves to the collection and statement of bare, and sometimes very dry, facts, whereas the anthropologists desired to riot in theories, sometimes with no more fact to support them than the anthropology of the Theosophists or the history of the book of Mormon. The anthropologists for eight exciting years, with a fluctuating membership of five to seven hundred, discussed, among other topics, thorny problems in sociology, religion, church music, the rights of the negro, the Adamites and pre-Adamites; then the membership began to dwindle, a movement towards union with the ethnologists was made, and that great man of science, the late Professor Huxley, as President of the Ethnological Society, proved the bond of union. The two London societies dealing with the science of man were amalgamated in 1871 as the Anthropological Institute of Great Britain and Ireland, a title to which his Majesty graciously added the prefix of Royal in 1907.

Since 1871 the (Royal) Anthropological Institute has always been a society poorly equipped in funds and spending its last penny in scientific research. But its output of work has been splendid and most stimulating, especially since the last ten years. Yet the wolf, in the form of a possible deficit, is always at the door. The response to occasional pressing necessities in past times on the part of the few among its members who are persons of means has been generous, and even the rank and file consented some little while ago to an increase in the subscription. Unfortunately, anthropology as a study

[3] Anthropology is the accepted general term for the Science of Man, but it is usually also employed in a specific sense to cover the physiological study of man as a mammal: in contradistinction to Ethnology ('The Science of the Nations'), which deals with all the aspects and results of man's mental development.

has not yet become a fashionable foible, as is happily the case with zoology in general or with horticulture. Existing professional anthropologists (though of the very elect and some day to be revered among the early saints in the church of science) are scarcely ever blessed with large incomes, and to many the limits of their annual money contributions to scientific research has already been reached. Of late, therefore, it has been felt by not a few members of the Institute that the time has arrived when the Imperial Government might see its way to making a small annual grant—say, 500*l.*—to the Royal Anthropological Institute, on the same grounds as those on which it makes a similar grant to the Royal Geographical Society.[4] The Institute has carried out an immense amount of anthropological research in all parts of the British Empire at its own expense or at the personal expenditure of time and money on the part of its associates, and without any cost whatever to the nation at large. The gratuitous instruction it has often imparted to Government servants has been of undoubted utility in encouraging that growth of sympathy and understanding between the governors and the governed which is one of the necessities of an Empire like ours.

To such a proposal there may possibly be the same peevish objection that nearly every new movement creates as its backwash. Some will say, 'If you are going to endow the Anthropological Institute, then the Zoological Society next will be asking for State funds,[5] and the Linnæan, Entomological, British Ornithologists' Union, Royal Asiatic, African Societies——' And why not? All these institutions do a vast amount of pure good, absolutely no harm, and have rendered services of very considerable economic importance to the city, the kingdom, the Empire.

I wish some abler, more authoritative pen than mine could bring home to the mass of the voting populace (and they, in their turn, force the knowledge on their representatives in Parliament, who can unlock the doors of the Treasury) the immense economic importance of 'pure' science. At the best these institutions are regarded with amused tolerance by the masses and classes on the 'keep-the-people-out-of-the-public-house' line of thought. Blamelessness is typified in comedies by a visit to the Zoological Gardens, the British Museum, and Madame Tussaud's. An evening spent at the Linnæan Society is considered to be decorous to the point of ostentation, but dull.

[4] The Royal Geographical Society in return for this modest grant places its magnificent library and collections of maps at the disposal of the Government, and further engages to impart practical instruction in surveying and other requirements of the explorer. The Royal Anthropological Institute could render like services to the Government in regard to the science of anthropology. It could instruct Government employés and others, and issue certificates of proficiency.

[5] At present the Zoological Society does receive this much assistance from the State, that its rental of a small portion of Regent's Park is—compared with existing values—calculated at a low figure. Fortunately popular support does the rest.

The fact is, that the time has come—if we are really going to be governed intelligently by intelligent people—when scientific research will have to be heavily endowed; in the same way that a Church or a religion was endowed with properties and tithes in order to place it above penury and the risks of popular indifference and vacillating support. In the course of centuries the people, as a whole, came to see the value of religion as a social factor and rallied to its assistance of their own free will. Gradually the popular contributions to the faiths enabled endowments to be redistributed or capitalised, and subsidies to be withdrawn, without the least detriment to 'pure religion and undefiled,' as defined in the imperishable words of the Apostle James. The time may come when the mass of the people will flock to the discussions at the Royal Anthropological Institute or the Entomological Society as they now crowd the music halls. When that happy advance has been reached science may safely be disendowed, unsubsidised.

Twenty years ago it began to dawn on the educated classes as a whole that anthropology in its many branches led to very practical issues of application (fitness for the Army and Navy, finger-print identification, &c.). Before that, the study of the mental, physical, racial attributes of man, his past history and his future possibilities, was looked upon by Society as a boring fad, associated, it might be, with white whiskers, white waistcoats, and respectability (especially if you were a baronet whose younger brother collected *Microlepidoptera*), but still a somewhat foolish pastime ranked in importance with stamp-collecting: in any case a stuffy pursuit. Now, Society would not be surprised at a novel depicting 'real life,' in which the hero was young, handsome, marriageable, and a Double First in Anthropology, who at the end of the book is rewarded with an appointment of two thousand pounds a year as head of the Anthropological Department of the Crown Colony of Barataria. The time will come, I believe, before long, when all candidates for all branches of service under the British Crown connected with the affairs of men and women of any human race will be as much required to be examined in anthropology as in reasonable mathematics, geography, history, and modern languages.

Policemen, magistrates, judges should pass examinations in this science from 'elementary' to the most recondite, in correspondence with the importance of the office they hold: they already have large and useful doses of it in the form of medical jurisprudence and anthropometry. Juries taught the simple truths of craniology at school would at once fix their attention on the shape and proportions of the prisoner's or the witness's skull and face, and disregard the conflicting evidence for the safer intuitions of the physiognomist.

Statesmen might form a correct opinion on the negro question if they acquired some exact information as to how and in what degree

the anatomy of the negro differed from that of the northern Caucasian, and whether in any one of his many stages of mental development he is above or below or on a level with the average white man. We do not yet know enough to speak dogmatically as to whether he shall mingle his blood with ours, to the detriment of American or European races, or whether the two divisions of humanity shall grow up side by side with absolutely no commingling.[6]

We do not yet know (though we may perhaps hazard a favourable opinion) whether the physical difference between the Euramerican and the Amerindian is so slight that the American peoples might be encouraged to absorb the Indians into their midst, with no more shame or lowering to the white man's ideal of physical beauty and fitness than has been occasioned by the absorption of the Gipsy and the Semite. Are the Amerindians of Canada to be allowed to remain and develop apart on different lines, as a race by themselves? Is home opinion to intervene (if it counts for anything) to secure just treatment for the red or yellow man of North America (so far as he is under the British flag), or is he a negligible quantity, to be allowed to drink himself to death or to die of the white man's diseases? (Canada, as a matter of fact, fulfils her duty to the Amerindians on her territory.)

What is to be done with the black Australian and the Papuan? Is fusion, extrusion, or isolation to be fostered in this case? Is their extermination (assuming such to be contemplated) to be allowed to proceed without remonstrance from the Metropolis? If the hybridising of the Australasian negroid with early types of Caucasian can produce such a good half-breed as the Polynesian, may not the latter again be encouraged to enter the white fold in the building up of great Australian nations? Or is the black Australian or the Papuan to be treated as the northern Caucasian races have seemed inclined to treat the negro—an equal to be respected but not to be absorbed? What, in short, are the plans which the Commonwealth will adopt for the black Australian's future?

Then there are the tremendous questions of India, racial questions that daunt one with their complexity and with the awful degree of happiness or unhappiness that may result from success or failure in their solution.[7] Once more the problem arises here in regard to the Eurasian half-breeds, who have merited so well the consideration of the British Government for the splendid support they have given to British rule in India.

'Is Uganda to be granted wider and bolder facilities for self-government?' may be the question to be considered by a British Legislature

[6] This much anthropology has taught us: that there is an ancient negroid element pervading the highly civilised Mediterranean, and that the negro makes a magnificent hybrid with the Arab or the Moor.

[7] In referring to India, attention might be drawn to the excellent work which is being done under the State of Mysore in an ethnographical survey conducted by H. V. Nanjundagya, M.A., M.L.

a quarter of a century hence, when sleeping-sickness has been eliminated by European science.

Are there to be local parliaments in India? Is there ever to be a confederation of the black West African Colonies and Protectorates, with larger measures of self-government? Is the Sudan to be wholly separate from the future of Egypt? Can we safely leave Egypt without a British garrison? Can we encourage France, Spain, and Italy to resume and continue the work of Rome in North Africa, or will the failure of our allies to do so involve us in an awkward position? Are we to encourage negro settlement in British Honduras, or is there any chance of the indigenous Amerindian multiplying and sufficing for that country's industrial development?

Shall Trinidad, like Mauritius, become a land of Indian Coolies? If we allow and encourage the millions of Chinamen to replace or supplement the sparse Malay and Negrito populations of the great Malay Peninsula and Borneo, shall we still be able to govern them in the interests of the British Empire and of the world at large? What can we make of Somaliland? Dare we aspire, if the Turkish Empire breaks up, to become the controlling power in Arabia? Does Persia contain the elements of regeneration—can she be formed into a strong, self-governing civilised Asiatic State independent of the help or control of England and Russia? Can we hope some day to receive her into the comity of the higher nations, as we have received Japan, and as, after many years of French and English training, we may receive Morocco and Egypt?

All these are questions in which the opinion of trained anthropologists would be well worth having.

Perhaps our anthropological studies should begin at home.

A great field lies before us most insufficiently worked. Elementary anthropology should be taught in all the State and public schools of Great Britain and Ireland, besides being far more widely and efficiently dealt with in secondary education and at the Universities.

A knowledge of the anthropology of the British Isles would—or should—clear up the Irish question. It would show, for example, that the Irish, like the Welsh and Scots, are composed in somewhat different proportions of the same racial elements as the British. It would also bring home to all of us the idiosyncrasies of the diversely constituted blend of Proto-Caucasian, Iberian, Kelt, Dane, and Saxon which now forms the people of Ireland; it would interest us, or should do so, much as we were formerly interested in Latin, Greek, and Hebrew, in the remarkable Keltico-Iberian languages of prehistoric features which are still spoken or remembered in Ireland, Man, Wales, Cornwall, and parts of Scotland, and which were once the speech of England itself.

It is preposterous that the dominating English people should for thirteen hundred years have ignored the two Keltic languages still

remaining in these islands—Goidelic and Brythonic. They are at least as interesting as Greek, Latin, and Sanscrit, and far more so than Hebrew. In their structure and vocabulary is locked up a great amount of useful 'prehistoric' history; these languages representing in varying degrees the combination in vocabulary and syntax between the Aryan speech of the invading Kelts and the probably antecedent Iberian language. (This last may have been connected with the Berber group of North Africa, or with Basque, which was spoken in France and Spain by the pre-existing peoples who were conquered by the Gallic Kelts.)

By reason of this neglect on the part of men of science, modern Irish, Gaelic, and Welsh have become transcribed and spelt in the most ridiculous and barbaric fashion, with far less reason in the use of the Roman letters than is even the case with modern English.[8]

Anthropological researches on the lines of statements recently published by Dr. Frank Shrubsall (of the Hospital for Consumption, Brompton Road) would show the results of town life under present conditions on this or that racial element in the British population: how, for example, tall blonds are best suited to a life in the country, while brunets are better adapted to resist the bacteria of towns. While in the last ten years or so anthropology has been turned to practical uses in most parts of the civilised countries in the matter of identification by finger-prints, it is also coming into play in regard to the State-care for the children, the checking of certain diseases in early youth which by neglect might permanently enfeeble the individual.

Naturally Medicine and Surgery have long been associated with Anthropology. So far as Comparative Anatomy exists in these islands, it may perhaps be said to have been founded by the great John Hunter, whose collections of comparative and human anatomy are permanently established in the remarkable museum of the Royal College of Surgeons in Lincoln's Inn.

This is the only museum, at present, that exists in the British Isles which deals effectively with the exposition of the anatomy of man, and in which it is possible for the student correctly to compare human anatomy with that of other mammals or other vertebrates. Nearly

[8] It must be admitted that the Irish, Highlanders, and Welsh have apparently gloried in this obscurantism, and in these uncouth transliterations of languages which are *by no means* difficult of pronunciation to any Englishman who is capable of talking another language than his own. A Government movement should be set on foot to establish authoritatively the standard pronunciation and phonetic spelling of Irish and Welsh, just as, for example, the Spanish Academy in the eighteenth century set to work to obtain and establish in a most sensible and logical fashion the correct phonetic spelling of Castilian. The modern Irish alphabet and orthography, due to monkish invention about thirteen hundred years ago, are rabid nonsense; equally unnecessary and absurd is the spelling of Welsh with y's, w's. ll's, dd's, ff's, &c., &c. The correct phonetics of these tongues should be ascertained by a select commission, who should forthwith establish a simple logical spelling in the Roman alphabet as laid down by Lepsius. These remarkable Keltic languages should then be taught throughout the United Kingdom as a branch of history.

a century of thanks is due by the British public to the College of Surgeons of Great Britain for their gratuitous assistance to the study of anthropology and of comparative anatomy in general by the institution and maintenance of this magnificent museum, the germ of which was the Hunter collection.

So far as public exhibits and displayed information are concerned, we are very much in arrears on the score of anthropology (the study of man as a mammal) compared with the museums of France, Germany, Belgium, Russia, and Austria-Hungary. Ethnographically, perhaps, we stand well, with our magnificent collections in the British Museum, though therein is all too little space for the adequate display of those collections which illustrate the primitive culture of the still-existing races of savage men or the gorgeous developments in art of the Caucasian and Mongolian peoples. The collections are there, the skill and zeal in exhibiting them in an educating way are decidedly present in a staff of exceptional ability; but the nation, as represented by the Treasury, still finds itself unable to meet the cost of further exhibition-rooms.[9]

But as regards the other side of the question—Man—above all, British man—considered physically: our efforts are most inadequate. Putting aside the private help afforded to students by the College of Surgeons, all that we know of Man as a mammal at the British Museum (Natural History) is crammed into a small portion of one of the uppermost galleries, up (I cannot remember how many) flights of fatiguing stairs. The greater part of this gallery is of necessity devoted to the exposition of apes, monkeys, lemurs, and bats. What remains is given up to cases containing a valuable collection of skulls (imperfectly exhibited for want of space), a few skeletons and bones, a placard refuting palmistry by an appeal to the gorilla's foot, and a not particularly good collection of photographs of certain savage tribes. As to the types of the British Isles, they are conspicuous by their absence. Go to France, Russia, Germany, Belgium, and Austria-Hungary, and in the public museums you will find magnificent collections of photographs (or life-sized models) of all the physical types of men and women in those countries, giving you some idea of the race or races to be found therein. Nothing of the kind that I know of exists in the British Isles, and all published works on anthropology avoid the subject, and reduce British anthropology to a few paltry paragraphs, illustrated by one or two picture-postcard photographs of fishermen or Welsh cottagers, wearing

[9] A British anthropologist, to whom I showed this article, writes in regard to this paragraph: 'Berlin, with 500,000 objects and 6000*l.* a year for purchases, beats the British Museum hollow; Dresden has nearly as much stuff, I should think. Hamburg, Cologne, and Leipzig are perhaps smaller, but with grants of 1000*l.* a year and upwards for purchases they will be dangerous rivals in the very near future. Do you know that France has now actually started an Anthropological Bureau for Government information?' We may rejoice in German emulation in such a good cause without slackening our own efforts.

stage costumes, together with some monstrously faked sickly-sweet 'types of English beauty' (in some cases amiable ladies of the stage whose birthplace was on the Continent of Europe).

But after attending in an adequate degree to the illustration of the Anthropology of the United Kingdom, the Royal Anthropological Institute of Great Britain and Ireland—if it were only properly supported and subscribed to by the nation as a whole—might get into touch with the educational establishments of the Daughter Nations, of the Crown Colonies or Protectorates, or of India. It would incite where they do not already exist (and this is hardly anywhere) the establishment of Anthropological societies or departments in all the great centres of population throughout the British Empire.

It would induce a desire to create an Anthropological society at Malta to describe the wonderful past and to delineate the present racial character of that most interesting and intelligent people the Maltese, whose language, like Irish and Welsh, locks up so much unwritten history. It—the parent Anthropological Institute of Great Britain—should urge on a much-needed anthropological survey of the British West African Colonies and Protectorates; of the Falkland Islands, where a new and interesting type of white man is being slowly developed; of Cyprus, where there are several layers of Mediterranean races; but above all of *South Africa*. Seeing that we have been the ruling power in the South African sub-continent for over a hundred years, it is little less than a *national disgrace* that we have made such poor use of our opportunity for enriching the knowledge of the world in regard to the past and present negro peoples of South Africa.

So far as Government action is concerned, there is scarcely anything to record. Fortunately there was once a Governor of Cape Colony with a strong love for science, Sir George Grey. Under his instigation Livingstone and Dr. W. I. Bleek collected much information as to perishing tribes—Bushman, Hottentot, and Bantu.

The Colonial Government established—and still maintain—a small fund wherewith to maintain a librarian and a museum curator at Cape Town, but in the National Library of Cape Town are still preserved in manuscript most of the important anthropological and ethnological studies of Livingstone, Bleek and others, which this great Colony has either been too poor or too uninterested to publish.

There are in pigeon-holes somewhere the very valuable Reports of Mr. Palgrave, the Commissioner sent in the early 'seventies to examine Damaraland (the anthropological photographs obtained on this expedition—most creditable to Mr. Palgrave, considering the epoch in which he worked—are in the collection of the Royal Geographical Society).

So far no great Afrikander has arisen who has displayed any scientific aptitude for the study of the Negro races of South Africa. Almost all the recorded work has been done by outsiders—British, *German*,

French, Swiss, and Norwegians. Yet what links in the chain of evidence of the evolution of humanity as a whole or of branches of the Negro species in particular are concealed in this southern prolongation of the Dark Continent!

The little research stimulated and paid for by the Cape of Good Hope Government has revealed the remains of a vanished race—the Strand-loopers—who are probably akin to the Bushmen, but of a less specialised and more primitive type.

Is there any truth in Professor Keane's account [10] of the Vaal-pens or 'Ashy-bellies,' based on the stories of travellers and writers who assert them to be a very primitive race still lingering in the Northern Transvaal, and perhaps descended from the aforesaid Strand-loopers; whilst other authorities, like Mr. F. C. Selous, deny their existence, or at any rate account for them as some starved remnant of an outcast Bushman or Bantu stock?

Private British enterprise, even on the part of people of very small means, has certainly done something to illustrate and elucidate the manners and customs of the South African Bantu races. We owe much recent information under this head to the writings of Mr. Dudley Kidd and Miss A. Werner, to a number of missionaries of the London Missionary Society, the Scottish missionaries of Nyasaland, the Rev. Father Torrend of the Zambezi, the Universities Mission, and to the Anglican bishops of South-Eastern Africa; but comparatively with the importance of the place that Trans-Zambesian Africa holds in the scheme of the British Empire, our knowledge of the anthropology and ethnology, and even the languages, of its five or six millions of negroes is pitifully small. The Government of Cape Colony has done something for which it should receive due credit; the other Governments have done practically nothing, and the Imperial Government has been the most indifferent of all. A good deal of what we do know has been derived from the results of explorations subsidised by the Governments of France and Germany.

Where in the whole range of *British* South African literature can we find such a work as that of Professor Leonhard Schultze, *Aus Namaland und Kalahari*? It is practically a description of man and nature—the anthropology, above all—in the N.W. parts of Cape Colony, subsidised by the German Government.

Crossing the Zambezi northwards, look at the way in which the German Government has enabled Dr. Fülleborn and others to illustrate the anthropology of German East Africa and Nyasaland, and consider what impetus or assistance the Imperial Government has shown in dealing with the anthropology, the native codes of law, the languages,

[10] Popular anthropology—I mean anthropology popularised—owes much to the labours and researches of Professor A. H. Keane and (more recently) of Mr. T. Athol-Joyce, of the British Museum, and Mr. Northcote Thomas; also to the publishing enterprise of Messrs. Hutchinson, Macmillan, Cassell, and Archibald Constable.

myths, traditions, institutions of British Central Africa, British East Africa, or Uganda. Such work as has been done by British pens has been for the most part carried out by missionaries, or by Government officials at their own expense, or by travellers and explorers not always of British nationality.

Our own Government is quite willing, if necessary, to spend millions on warfare in Africa and (*very properly*) millions on railway construction; but it has not held up a finger of encouragement or provided a pound to lay the foundation of a sound study of the anthropology of regions wherein—even more than in South Africa—it is necessary for the administrative white man to know most thoroughly the minds and bodily characteristics of the Negro and Negroid races with whom he has to deal.

Private enterprise just enables the Royal Institute of Anthropology to keep alive. A Government grant of 500*l.* a year from out of the brimming revenue of the United Kingdom would place it above all risk of the bailiffs being put some day into its one-pair back at No. 3 Hanover Square; would enable it with a lighter heart to extend its researches and its practical instructions to those about to travel.

Private enterprise has likewise started and kept going the Royal Asiatic Society (but this, I believe, receives a small grant from the India Office), the Central Asian Society, the African Society; and there may be for aught I know a Chinese Society; there ought certainly to be one dealing with the Malay races of our vast Malay possessions. The Royal Asiatic Society outdistances all these other bodies by the length of its existence. Its journal, in many volumes, contains a splendid accumulation of Eastern lore. Unfortunately this is *caviare* to the general mind; some Harmsworth, some Saleeby, some Hooper is required to come along some day and—with due permission and participation of profits—boil down the researches of the Royal Asiatic Societies of London, Calcutta, and Bombay into palatable ethnology, and thus get them consumed, digested, and assimilated by the British public.

It has been of late the fashion to scoff at the efforts of the *Times* or of Carmelite Buildings to invigorate knowledge by hypnotising the British public into the purchase of encyclopædias, histories, and self-educators. In my own humble opinion, these agencies have by such means increased the general education of the upper and middle classes by at least one-fifth. The ninth edition of the *Encyclopædia Britannica* may or may not have been slightly out of date for the *fine fleur* of intellect of the year 1900, but it was quite new enough knowledge and sound enough for nine-tenths of the population to whom it had been more or less inaccessible.

In the same way—if I may venture to offer an opinion of my own—one would like to see some such publishers as those mentioned compel the British public to take in a great work on anthropology—

on the anthropology, let us say, of the British Empire, in twenty-four volumes, with an index and an atlas. It would be a beneficial work, because it would go a long way towards educating the British public in the cares, opportunities, and responsibilities of the Empire.

Comparative anthropology has not yet come into existence in a complete form—that is to say, no individual or group of scientific men have yet had the means or time or knowledge to compare carefully and conclusively the anatomy of each racial type, species, or sub-species, one with another. In a limited manner this has been done through the comparison of skulls—shape, length, and breadth; capacity and facial angle; and, in a much less degree, by the proportion of the bones of the skeleton, the poise and curve of the spine. Comparisons have, at any rate, been made between such extremes as the highest type of Caucasian and the negro or Australasian.

Some comparisons have also been made in the head-hair—as to whether it is round, oval, or elliptic in section; its colour, straightness, or tendency to curl. But in a general way, as contrasted with our intimate knowledge of the comparative anatomy of the different species of cat, of horses, asses, and zebras, of cattle and dogs, we are still most remarkably uninformed as to the comparative anatomy of mankind. Such types as the fair-haired Caucasian races of Europe and America are as well known to us in all the details of their anatomical structure and physical condition as we could expect in the twentieth century and in the inheritors of the science that began with Aristotle; but what has been definitely recorded as to the anatomy of the Arab, Tartar, Chinaman, Negrito, Papuan, Hindu, Ainu, Esquimaux, Malay, Australian, Amerindian, Veddah, and even most types of negro? I mean, in comparison to the white man of northern Europe and America.

As regards the negro, we are better informed than about any other human race than our own, because for at least a century the physical structure of the Aframerican has undergone careful scientific investigation by the surgeons and anatomists of the United States; but the negro after two or three centuries of settlement in the New World may have already begun to differ in blood and bone, bowel and muscle, from the aboriginal native of Africa. Already he finds himself as prone as the European to suffer from the diseases of Africa, should he return there. He has lost the *relative* immunity to malarial fever of an African type which his West African forefathers possessed.

We know, in short, so little about the structure of all the living races of mankind (as compared one with another, and again with the forms nearest allied to humanity amongst the apes) that I return to my first assertion in stating that the science of Human Comparative Anatomy has scarcely yet been established on a sound basis.

We know so little on this subject that we are not able to decide whether all the living races of mankind are merely local varieties of a

single species, whether some of them are to be elevated to the rank of a sub-species, or whether three or more types are sufficiently divergent to be considered separate species of a single genus—of the isolated genus *Homo*. Anthropology, however, brings out forcibly the fact that all men are brothers under their skins; the study of this science therefore is the best corrective of intolerance, cruelty, racial arrogance, and narrow-minded conceit. It is perhaps in our own country—it should be everywhere—the science of kings and rulers.

H. H. JOHNSTON.