

THE SCIENCES AND SOCIETY

KENYA COLONY, one of the jewels in the somewhat battered crown of the British Empire, comprises about 224,000 square miles of the most productive land in East Africa, inhabited by slightly over 3,000,000 people, of whom less than 20,000 are white Europeans. Rubber can be grown there; enough cotton can be raised, so experts claim, to make the Empire independent of the American supply; coffee, maize, and other food crops flourish—some of them twice a year; and there are immense possibilities for livestock development. The recent discovery of gold on the Kenya native reserves has led to further plans for large-scale exploitation—on the assumption, apparently, that it is more ‘useful’ when stored in subterranean bank vaults under heavy guard than when locked up in placer gravel or in lumps of ore. More to the point in a ‘chemical age’ is the fact that on and around Lake Magadi lie perhaps the largest deposits of natural soda in the world: 348 square miles of these valuable deposits have been turned over by the Kenya Government to the sole use of the colossal Imperial Chemical Industries, Ltd., an account of whose world-ranging activities was published in the October *LIVING AGE*.

Nevertheless, all is decidedly not well in Kenya Colony. Aside from the numerous grave economic disorders resulting from the Empire Government’s policy of land reservation and imperialist exploitation of its natural resources, health problems seriously affect the native population. The leading editorial in a recent issue of *Nature* (London) summarizes a few of these difficulties.

DR. H. L. GORDON, of Nairobi, the capital and big-game centre of the Colony, has been conducting researches into the brain capacity and mental ability of the native Africans of Kenya Colony. An

examination of the skulls of 3,444 unselected natives (adult males) and of 100 skulls belonging to definitely ‘normal’ individuals showed that the ‘cranial capacity’ averaged 1,316 cubic centimetres, about 150 grams less by weight than the brain of an ‘average’ European. This fact alone is insufficient to prove mental inferiority (Sir Arthur Keith gives a range in cranial capacity of human beings of 1,000 cubic centimetres), but Dr. Vint, a government pathologist, claims to have discovered that the brains of Kenya natives reveal a quantitative deficiency of 15 per cent in the cortex, the extremely important cells of which are also smaller, less well arranged and shaped than in the European brain. Commenting on these facts, *Nature* pointedly asks, ‘From what social class are the European figures derived, educated or uncultured?’ On the basis of his observations, Dr. Gordon feels justified in asserting that the brain of a native African attains its maximum development at the age of 18, diminishing thereafter; that the average mental age of educated Africans corresponds to a European schoolboy of under 11 years; and that senility may be expected at any age after 35—certainly long before 60.

TAKEN BY THEMSELVES, such figures look like another attempt to establish the ‘racial superiority’ of Aryans over all other stocks. From them Dr. Gordon is content to infer merely ‘that European education is not suited to the intellectual capacity of the African but sets up a series of strains and stresses affecting mental stability, which all but the most robust are unable to withstand.’

From the words, ‘all but the most robust,’ it would appear that the ‘European’ education requires a very athletic disposition and that a physiologically weak organism is unable to learn the

three R's. The mystery is solved by certain other figures touching on the health and hygiene of the African natives under benevolent British imperial rule. *Nature* proceeds to cite from the material illustrating 'the astonishing multiplicity of diseases in the individual native' of Africa, as gathered and presented by Dr. J. H. Sequeira in 1932. We learn, for example, that the child mortality in Kenya Colony ranges from 125 to 400 per thousand births (contrast with 68 in the United Kingdom—and 129 in one working-class ward of Glasgow) and that from 94 to 98 per cent of the native children under 10 years carry traces of chronic malarial infection. In one reformatory, 75 per cent of the boys were—as the inhabitants of *Erewhon* might say—'guilty' of hookworm, and throughout the Colony 'pneumonia of pneumococcal origin is especially fatal and widespread.' The strenuous demands of a 'European' education (as adjusted for the special needs of the African natives) is further illustrated by such facts as these: 'Among 16,754 men called up for enlistment as carriers, 10,912 were rejected on medical grounds and a further 17 per cent fell out on the march to Nairobi; and in a railway job employing 14,400 men, the death rate was 35.4 per thousand and admissions to hospitals were 5,331.'

The extremely complicated problem of mental ability is thus, once again, seen to be hopelessly involved with the more concrete, if equally complex, problems of physical condition: as *Nature* puts it, with characteristic understatement, 'While lack of sanitation and ignorance are largely responsible for these conditions, the fundamental cause is generally held to be malnutrition'; and the editorial quotes, with approval, the comment on these same facts by the distinguished scientist, Sir Grafton Elliot Smith: 'No one would be foolish enough to suppose that the examination of the brain alone is likely to explain the mental qualities of the native,' however essential it may be

to a 'preliminary reconnoissance for the investigation of a problem of extraordinary difficulty and complexity.'

THE SAAR PROBLEM—frequently discussed in these pages—is basically a problem in what the Germans call *Geopolitik*: freely translated, 'resource-strategy.' A timely article on 'The Geographic Background of the Saar Problem' by Dr. Hubert A. Bauer, published in the October *Geographic Review*, throws considerable light on the material factors underlying the dangerous political tension created in this territory by the approaching plebiscite.

Of primary significance is the intimate geological and geographic relationship binding the rich coal fields of the Saar to the equally rich iron ore deposits of the neighboring Lorraine district. (It will be remembered that both of these areas were under German control until the Treaty of Versailles.) Dr. Hermann Röchling, one of the most powerful of the German industrialists in the Saar and always a bitter enemy of French interests, contends that this relationship—duplicated only in the Birmingham, Alabama, district—is superior to all political boundaries. (Why, then, it may be asked, does he support the Nazis so fervently?) Lorraine minette ore has long been a major factor in the European iron and steel industry, while Saar coal, despite its inferior coking qualities, is indispensable for a great variety of industrial and power uses throughout the area. Furthermore, technical improvements in coking and in by-product utilization (gas, tar, ammonium sulphate, motor oil, etc.) added to cheaper freight rates as compared with Rhenish, Westphalian, and English districts, give the Saar coal a stronger position in the European heavy-industry complex.

DURING THE period when German interests controlled the iron mines of Lorraine, the German-owned steel mills

of the Saar were able to flourish on the production of so-called 'Thomas steel' (a development of the Bessemer pneumatic process). With the passing of Lorraine to French control, prices of the minette ore rose almost 100 per cent, forcing the Saar mills to costly readjustments that would permit the making of 'Martin steel' from scrap iron. That the German iron and steel industry succeeded in making the change is well known from the success of her post-war products on the world market, but the problem of growing French control in the Saar remained to embarrass what Ernst Henri has called 'the dynamics of the Ruhr.' We see this in the fact that in 1932 Germany consumed only one-fourth of its former share of Saar coal, whereas French railways and gas plants used more. A return of the Saar to Germany would, without doubt, sharply increase the cost of this excellent fuel to French consumers; and there is the added annoyance that newly-opened Saar mines in the neighborhood of Lorraine are by no means a compensation, for the coal seams here are very poor in the 'fat coal,' which is precisely the type most needed by French industry. An escape from this dilemma through such waterway projects as the Saar-Moselle canal would impose economic penalties on the South German market, although another plan to connect Metz and the Lorraine section of the Saar coalfields with a canal may favor amicable economic relations between the two contestants for supremacy in this much-harassed area.

It must be said also that, during its 15 years of control, French industry has done little or nothing to improve its management of the Saar mines. Decreasing efficiency and crude exploitation have been the rule, with resulting discontent among the 27½ per cent of the population engaged in mining. Nor has any effort been made to introduce modern methods like those that have increased the efficiency of the Westphalian fields by 47 per cent during the past ten years.

Dr. Bauer concludes his very informative account with this terse summary:—

'The formidable *bloc de charbon*, from which the Saar population will draw its very life-blood in the future as it has done in the past, is not only geographically a keystone between French and German lands; it is also destined to play a keystone rôle in the future economic relations between the two great rivals on either side of the Saar.'

GERMAN SCIENCE and education, not so long ago supreme in western culture, are rapidly being 'coördinated' with the Nazi totalitarian state. Under the heading, 'Germany's New Academies,' the *Manchester Guardian's* Berlin correspondent describes as follows the new National-Socialist educational system directed by Dr. Rust:—

Neither the relaxing ideals of the 'humanities' nor the stern rigors of pure science have any place in a society the highest aim of which is to build up character and virtue in the sole authorized descendants of the mighty Aryans. 'The classical triad of gymnastic, musical, and political education' is to be supreme, and the aspirant to Nazi honors will receive instruction in such subjects as motor-car driving and aërial flying, sporting and quasi-military physical exercises, theory and practice of the Storm Troops, aërial gliding and motor-cycling, fencing, riding, and other subjects calculated to improve muscular, if not intellectual, power. Naturally, enough mathematics, history, and literature will be given to help the blue-eyed heroes to realize the immense significance of the rôle to be played by Germany in world history for the next thousand years.

That this is all intended in utter seriousness is shown by a recent speech of Herr Hans Frank, Nazi Commissioner for the Judiciary. Speaking on educational problems Herr Frank issued a stern warning that scientists and learned men were to bury all their 'academic' quarrels and

'theoretical' disputes in a common grave and unite in a whole-hearted glorification of Nazi ideals, irrespective of the violence thereby done to their own people or to humanity.

THE SCIENTIST who is conscientiously trying to keep up with what is going on in the scientific world—or even only in his own small section of it—is faced with a problem known by the official designation of *A World List of Scientific Periodicals Published in the Years 1900-1933*. The *World List* records more than 36,000 individual titles of periodical publications, issued in numerous countries and many languages. This is 10,000 more titles than appeared in the first edition, covering the years 1900-1921, and represents an average increase of nearly 1,000 publications per year. A volume of nearly 800 pages is required merely to list these items.

On the basis of language alone (irrespective of subject-matter) the entries are divided into 18 classes, of which the five most prominent are distributed as follows:—

English	13,494 periodicals
German	6,186 “
French	5,013 “
Russian	1,833 “
Italian	1,667 “

'If,' as Sir Charles Sherrington remarks in commenting upon this *World List*, 'periodicals constitute the main bulk of scientific literature' the attempt to secure anything like a well-rounded view of science in general, or of any science in particular, becomes more and more like the proverbial search for the needle in the haystack.

SIGNIFICANT PROOF of the increasing seriousness of malnutrition in modern life—particularly as it affects Great Britain—is offered in the first four *Bulletins* published by the recently organized Committee against Malnutrition, with headquarters in London. This Com-

mittee, which has enlisted the sympathy and active aid of numerous associates in the medical and allied professions, has publicly announced its general agreement on the following points:—

1. That there exists in this country widespread undernourishment among the families of unemployed and low-paid workers.

2. That this must lead to a steady deterioration in the physical standards and health of the population; and of this deterioration there are already signs.

3. That the last thing upon which a community must economize is the nutrition of its working class.

Without specific political affiliations (of the Right or Left) and with no programme of economic or political reform, the Committee proposes to conduct thoroughgoing investigations into the living condition of the deprived classes in Great Britain and to give the widest possible publicity to its findings. To judge from its *Bulletins*, a very considerable body of material has already been gathered on such subjects as 'Diet Standards,' 'Nutritional Anæmias,' 'The Frustration of Medicine.' Of particular value are the surveys submitted by the official medical and health officers of England, summarizing the conditions in their communities. One example, the very district that turned down Sir Oswald Mosley, the 1926 candidate for election on the Labor ticket, is grimly characteristic of scores of communities throughout the British Isles today:—

Smethwick, Medical Officer of Health (1932): 'The poorer classes in Smethwick to-day are consuming an insufficient amount of the basic articles of diet. The consumption of milk is deplorably low, especially among the children and expectant and nursing mothers . . . The maternal mortality rate increased from 1.95 to 5.43 per thousand births. I attribute a considerable proportion of these deaths to poor nutrition on the part of the mother . . .' —HAROLD WARD

AS OTHERS SEE US

AMERICA LAUGHS AT HERSELF

JOHAN GARRETT, one of the many light essayists whose work enlivens the *New Statesman and Nation*, discusses as follows America's capacity for self-criticism in the form of laughter:—

Maybe it is all a question of manners. On this side we hesitate—even if the law permitted it—to ascribe to our rulers anything but worthy motives. They may be stupid, but they are well-intentioned. Such a sketch as 'The Hoovers Leave the White House' in the revue *As Thousands Cheer* would be inconceivable here. Mrs. Hoover is represented as removing with her as much as she can carry. The spoons, the radio aerial, even the Gilbert Stuart portrait of George Washington himself, nothing is sacred from her determination to leave nothing behind 'for those damned Roosevelts.' Her husband remonstrates, but he is brushed aside with 'Well, Herbert, we ought to get *something* out of your being President.' To which he replies: 'Why? No one else did.' And the audience rises to a man.

A comparison of *Punch* with the *New Yorker* is all the difference between mother's milk and vitriol. But America likes the savage satire of Peter Arno, and for wholehearted hatred of all that is cruel, narrow, and intolerant, expressed in terms of paint, a contemporary picture in a Baltimore exhibition, called 'Daughters of Revolution,' is without equal. When Americans criticize they do it with no half-hearted anger. It is the mood of Ben Jonson at his most savage, the mood in which he wrote *The Alchemist*, that astonishingly modern exposure of quackery. England could do to-day with another Jonson to expose the quackeries that beset pseudoanalysis.

In a country where a new craze is born overnight there is need for the laughter that exposes folly. A new cause is Universalism, which claims that the whole world is awaiting the solar system. Its manifesto proclaims that the color of Universalism is white, its flag is white, its shirt—notice this practical touch, for no cause can hope for survival with no shirt to its back—is white, 'white as the light of love.' This latest activity of the charlatan in religion calls for the pen of Mr. Sinclair Lewis for its chastisement. But, the more's the pity, Mr. Lewis seems to be coming to terms with the world that yesterday was his anathema. For fourteen years he has 'rubbed the sore' and withheld 'the plaster.' Now he has abandoned his contemplated novel on trade unionism in the U. S. A., after a year spent in the company of Labor leaders learning the map of the country. Instead he produces *Work of Art*, a novel drained of his ferocity of indignation (and therefore of his merit) and extolling the virtues of a man who gets quietly on with his job. Maybe he has wearied of cauterizing the nation, but the nation is the poorer for his defection. Poorer because America has always been more willing to listen to Mr. Lewis than has England to her own critics. Poorer, too, because in a country where revolutionary changes can occur in the space of a few weeks the ground is more promising for the fruitful work of critic and satirist. George Meredith's words on the comic spirit express at once the need for satiric criticism and the response that America is making to the urgency of need, for the critics are for the most part proving equal to their moment: 'Whenever it sees men self-deceived or hoodwinked, given to run riot in idolatries, drifting into vanities, congregating in absurdities; whenever they are at variance with their professions and