

and the Ultra-Indian peninsula from Asam to Singapore, and even to have extended to the Nicobars, Sumatra, Borneo, and beyond. In India, on the west and south-west, the Tibetan element dies out, and gives place (gradually) to the purer Dravidian; and here we have the darker Kol alliance, Munda, Santali, &c., say, roughly, two-thirds Dravidian and one-third Tibetan. Further east we have the relics of the Mon in the Bodo, Koch, Mech, of the Delta, and the Garo-Kasia of the eastern hills, the latter more Tibetanised by later influx of Tibetans *visû* Bhutan, in physique and language.

Then we have a vast gap filled in by later "Tibeto-Burman" races, and come to the "Mon" of Pegu, who show the influence of the Tibeto-Burman inroads, though retaining still considerable "Kasia" affinities. The Kambojans, again, are another fragment of the "Mon," having specific affinities with Manipuri and Naga. Anamese, again, is distinguished by its strong Manipuri, Barak, and Kol affinities, and showing Chinese influence, through contiguity becoming more monosyllabic.

Logan, who was an expert in these matters, tells us that "the Mon-Anam pronouns and numerals are partly Tibetan and partly Dravidian—chiefly the latter—but most of the substantial roots are similar to Tibetan, and the forms more archaic than the current Tibeto-Burman." "The difference between Dravido-Australian and the Mon-Anam formation is so great, that it may be safely connected with the equally striking difference of race, and ascribed to a long-continued and total ethnic separation during its earlier history. The Simang and Andamani are the purest remnants of a pre-Himalaic race in Ultra-India, and it is probable that similar Dravido-Australian tribes [lived there] before the Mon-Anam entered the region."

But one of the best proofs that the "Khmer" are not Dravido-Australian is, that the Australian races all have numerals on the binary basis 1 and 2. Three is 2+1 or 1+2. Four is 2+2. Five is 2+2+1. This was formerly the basis of the Dravidian system, long before the Mon-Anam (Khmer, &c.) arose as a race.

The Australians, in fact, whose languages are known to be "more nearly allied to the South Indian than to any other in the world," left India (probably *visû* Malaya) when the Dravidian numerals were in their earliest binary stage, and before the quinary and denary stage was developed (anywhere).

As Logan says, "the quinary and denary systems, with the Dravidian mode of forming 8 and 9, indicate affinities belonging to much later periods. The civilisation which originated them, was unknown to Dravido-Australian at the time when the early Asonian migrations took place."

That the Mon-Anam race, much later on, passed south and east from India, and extended even over the Archipelago and Pacific, is becoming yearly more obvious, not only through study of physique and customs, but the number of roots, pronouns, and vocables having a *Himalaic* basis. But from their site of origin, in Bengal, as a (locally varied) admixture of Tibetan and Dravidian, the racial development and tribal drift may have been exceedingly slow, like the drift we see now among the much later Tibeto-Burman, Lushai Kuki, &c., taking probably many centuries in crossing from the Delta, across the Barak, Manipuri, and Naga Ranges, and *visû* Asam. That they at one time covered the entire Ultra-Indian peninsula, is obvious from the position of the fragments of the race, due to the intrusion of the Tibeto-Burmans, but that they extended to the east of the Upper Irawadi is doubtful.

The Cham, Charay, Stieng, Xong, Samré, and Kuy are the less known, more barbarous, and purer branches of the Mon-Anam living in the Mekong highlands. S. E. PEAL.

Sibsagar, Asam, August 11.

#### Dr. Siemens' Smokeless Open Grate.

DR. C. WILLIAM SIEMENS described fully in NATURE (November 11, 1880, vol. xxiii. p. 25) a smokeless open gas and coke or gas and anthracite grate for living rooms, costing about one halfpenny per hour in fuel. Will any users of this grate, who may have an extended experience of it, relate their views, and state any lessons its use may have taught them?

During an extensive hunt for a smokeless open cheap grate, Dr. Siemens' grate is the most satisfactory I have yet found.

FRED. WM. FOSTER.

Neckinger Mills, Bermondsey, September 9.

NO. 1403, VOL. 54]

#### THE LIVERPOOL MEETING OF THE BRITISH ASSOCIATION.

IV.

LIVERPOOL, September 14.

WE are now on the eve of the meeting. St. George's Hall opens to-day as the British Association reception-room; and although the attendance on the first day will be chiefly Liverpool people securing their seats for the evening addresses in the Philharmonic Hall, still a few visitors from other parts of the country and from abroad have already arrived, and many more are expected to-morrow. We are told that more associates' and ladies' tickets have now been taken than at any previous meeting on the corresponding day. These local ticket-holders, along with the members from elsewhere who have intimated their intention of being present, amounted on Saturday to about 2500, so there is every prospect of a large gathering.

The last meeting, for the present, of the Executive Committee was held on Friday, and the local secretaries then reported upon the final arrangements for the meeting. The Town Hall will probably prove too small for the number of members who will attend the first soirée, so the Lord Mayor (the Earl of Derby) has obtained permission from the Committee of the Exchange News-room, across the Exchange "flags," to utilise that magnificent hall, in addition to the Town Hall, for his entertainment. A covered way will connect the front of the Exchange News-room with one of the windows of the Town Hall.

At the second soirée, to be held in the Walker Art Gallery, Free Library, and Museum, the accommodation is ample, so provision is being made for short lectures, lantern demonstrations, and various exhibitions in the galleries and rooms.

Nothing has been changed in the other Sectional arrangements and fixtures already announced, but some additional information has come in regard to the probable work of Sections F, I and K.

In the Section of Economics and Statistics, the proceedings on Thursday will be opened at 11 a.m. by the Presidential Address, which will deal with economic teaching and political action. The treatment of this subject derives much additional importance from the almost unique position in the political world occupied by the President (the Right Hon. L. Courtney). In due consideration that the meeting takes place this year in a large and busy commercial centre like Liverpool, several sittings will be devoted to the consideration of matters of directly practical, as well as theoretic interest. On one day (Friday), three papers will be given by Messrs. Cannan, W. H. Smith, and Blunden on various points relating to the incidence of local rates and the municipal control of finance. On another day (Monday), future dealings in produce will form the subject of discussion. Papers dealing with these will be contributed by Mr. H. R. Rathbone, Mr. Charles Stewart, and Mr. E. Helm, of Manchester. On Tuesday, currency questions will occupy the attention of the Section, when it is hoped that a paper will be read in defence of the gold standard by Mr. William Fowler. One or two papers from the bimetallic side are promised. Other papers will deal with the effects of trade amalgamations, systems of economic education, standard of value and money, commercial crises, cotton prices, remedies for agricultural distress, metric system, and other important subjects. It is hoped that there will be included among these a consideration of some aspects of charitable and philanthropic trading, by Mr. C. S. Loch.

In the "Section of Physiology, including Psychophysics and Experimental Pathology," in addition to the Presidential Address and the discussions already