

By the courtesy of the Editor I have read Mr. Richards's letter, and think that he and I disagree solely by reason of the difference in our Indian experiences. If it were a case of starting with a clean sheet there would be no greater difficulty in adopting the metric system than in adopting any other; but this is not the case. The British yard *has become* very widely known, whereas the metre is quite unknown. The Peshawari yard and the Ilahi gaz, themselves variable units, are used only to a comparatively small extent, while the most widely known unit of length, the hath or cubit, is very near to half the British yard, and as a matter of practical fact this measure is regarded as representing it exactly.

Similarly, the acre *has now become* very widely recognised and used as a unit of area, while the hectare has scarcely even been heard of.

It is true that the 80-tola seer (of 14,400 grains) is near the kilogram, but it is not exactly equal thereto, and to change it would, as a matter of practical fact, involve altering the weight of the rupee, as that coin is universally recognised as representing in weight 1 tola. This question of changing the weight of the rupee so as to give a seer of exactly two pounds, or else of 1 kilo, was one that the Weights and Measures Committee considered very carefully and on which it recorded much evidence, and (the majority of the members) reluctantly came to the conclusion that any alteration—whether in weight or value—of that coin would give rise to so much suspicion as to make it more than doubtful whether such a change would be worth while.

It has taken fifty years to spread the knowledge of the 80-tola seer to the extent now achieved; to introduce a new unit would mean starting all over again, and the same remark applies to any change in the units of length or area.

I have no doubt that engineers would prefer the metric system—so would I, personally. But the people of India are not engineers. Ninety per cent. of them live in villages or small towns of less than 5000 inhabitants, and are only interested in weights and measures being true and uniform within the limited range of their journeyings. For one transaction in which it would be an advantage to use a world-wide system, there must be at least 10,000 in which it would be of not the slightest advantage.

Mr. Richards refers to Canada. I imagine that it would be difficult to find two peoples more absolutely different than those of Canada and of India; the Canadian is well educated and progressive, the Indian, as a rule, very poorly educated, and intensely conservative. It would be difficult to conceive of widespread lecturing on weights and measures in India; audiences might perhaps be secured in half a dozen of the largest towns, but nowhere else, and the population of India is more than thirty times that of Canada. (I do not wish to imply that Mr. Richards thinks lecturing advisable, but merely to emphasise the difference between the two countries.)

My own experience of India at the time of the Weights and Measures Committee was twenty years in the Civil Service, all on the executive side, in the course of which I usually spent four to six months every year on tour among the villages and small towns of my district; that of my Indian colleague on the Committee (who shared my views, with very insignificant exceptions) was very similar. With this experience we disagreed from our other member, and held that there were not sufficient advantages attached to the metric or other non-Indian system to justify us in making a recommendation which, if accepted, would affect the method of carrying out

an enormous number of petty transactions, and could be given practical effect only by a large amount of interference. Now interference of such a kind as would be required to enforce the use of a new system of weights and measures means interference by a large and therefore necessarily low-paid staff, and what that means any one with Indian executive experience knows, for though the head of the Indian Government colossus *may* be golden, its feet *are* very certainly still decidedly argillaceous!

In brief, we found a very general desire for a uniform system of weights and measures, but for one based on a unit that was known, and hence we recommended that system which could be adopted with very much less difficulty than any other.

C. A. SILBERRAD,  
President Indian Weights and Measures  
Committee, 1913-14.

### Harpoons under Peat in Holderness, Yorks.

ON page 481 of NATURE for October 7, Mr. O. G. S. Crawford states that he believes one of the alleged harpoons said to have been found under the peat in Holderness to be genuine. At the Hull Meeting of the British Association he thought that both were genuine. After the spade-work to which he refers, I feel satisfied that he will consider both of them are modern. I am also glad to learn that he now regards the evidence supplied by the flint axe to be of no value, whereas formerly he considered that it helped to prove the great age of the harpoons.

As one who knows Holderness fairly well, I should like to ask what evidence there is for the statement that "There can be little doubt that in Holderness exist remains of the early neolithic age, remains which are older than the Long Barrows"? At Hull we were promised that a committee should be formed to inquire into the question of the harpoons. I have heard nothing further about it, but trust such a committee may be called together.

If I have cast doubts upon the authenticity of implements which have been accepted as genuine by quite a number of authorities, and my doubts prove to be unfounded, I deserve censure. If, however, the statement I made proves to be correct, the facts should be published, in the interests of truth.

Reasons for my belief are given in a communication which I sent to the Editor of *Man* a little while ago, as Mr. Armstrong's illustrated description of the harpoons first appeared in that journal. I do not remember having made the statement in public that the harpoons had been "*made* by the supposed finder." I did say they were not as old as Mr. Armstrong.

The Museum, Hull.

T. SHEPPARD.

### The Relationship between the common Hermit-crab (*Eupagurus bernhardus*) and the Anemone (*Sagartia parasitica*).

THE relationship between the common hermit-crab (*Eupagurus bernhardus*) and its messmate anemone *Calliactis* (*Sagartia*) *parasitica* has long been a subject of much conjecture, owing largely, the present writer thinks, to the unnatural figures of these animals in all the text-books and most popular books—derived probably from old and abnormal aquarium specimens. In most figures purporting to show the relationship of these animals, the anemone is shown with its tentacles beautifully expanded and the mouth region facing *upwards* away from the ground, and generally