

22nd May, 1951.

My dear Hardy,

I have just glanced through the two papers by Zuckerman and Ashton and indeed, I had previously a general idea of their content and aim.

May I divide your query into two parts?

(a) One as to whether in my opinion the methods used by Zuckerman and Ashton on this anthropoid or hominoid material are such as to decide the taxonomic position of these forms, and

(b) Whether there are other grounds for continuing the grant which the workers have so far received.

On the first question, I, for my own part, have no hesitation in saying that I do not think the measurements they have published so far are of any considerable importance in judging the affinities of the fossil forms. In saying this I should admit to a prejudice, for it would have seemed to me, a priori, most improbable that an examination of the means and variances of a large number of cranial or dental measurements separately ^(with no covariances) should lead to any decision more convincing than the subjective impression of an experienced taxonomist. Speaking a priori I should have said that the whole method was far too clumsy and I should have recalled the very high hopes which once were placed on craniometrical technique in

human ethnology, the questionable status at the present day of every single measurement of index, the realisation among craniometricians that only by the simultaneous values of a number of measurements could one hope to make efficient discriminations.

As to the craniometricians, I do not say that the position is hopeless, all-be-it precarious and difficult. Some of them have learned by experience and have become critical of what were formerly regarded as panaceas. You will see, however, that I had reason to regard Zuckerman's confident plunge into rather unsophisticated statistical methods with a certain amount of misgiving, and as I think I mentioned above, on reviewing the nature of his conclusions in the specific cases to which he had applied them, I do not see why anyone should be shaken in their previous opinion. In particular, I feel strongly critical of the method of summarisation adopted in tables 12 and 13, page 518.

I think the question of the grant can be looked at from other points of view, ^{as in a court} ~~as in a court~~ of law, it may be a good thing ~~that~~ discoveries of critical importance should be subjected to criticism as damaging as possible, in order that supporting evidence from many different sides should be mobilised in their defence. (There is always a case too, for not quenching ^{an} abortive effort before it has had time to mend its hand and fill up its inadequacies. I think this is a good principle in general, but in the present case, one must

remember that Anthropology, ^{and by} ~~by~~ using very similar biometrical methods, has had a long run, has been treated with the utmost confidence and respect, and yet that Zuckerman and Ashton seem to be almost unaware that this use of statistical methods involves any difficulties.

In any case, I presume the continuance of the grant will be considered simultaneously with other applications and must depend on whether other proposals for the advancement of natural knowledge are more or less promising than that which Zuckerman and Ashton put forward. In making this comparison, I presume the new scheme or further programme will be judged on its own merits, for there is nothing in the two Phil. Trans. papers to indicate that the method has not already had an adequate opportunity of showing what it can do.

Yours sincerely,