PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY A MATHEMATICAL, PHYSICAL & ENGINEERING SCIENCES

Concluding Remarks

S. Piggott

Phil. Trans. R. Soc. Lond. A 1974 **276**, 275-276
doi: 10.1098/rsta.1974.0023

Finally, I should like to express the sincere thanks of the Royal Society to those who have come to this meeting, often from far away and at some personal inconvenience, and have presented so many excellent papers or contributed to the discussion. I am sure the Organizing Committee would wish me to voice our gratitude to Dr Roy Hodson, who has from the very beginning taken on much of the burden of organization; and also to the Royal Society's staff and especially Miss Ritchie, for providing such a smooth run-up to the finishing line. Everyone who attended will, I am sure, depart with wider horizons; I also hope everyone found the meeting as enjoyable as I did.

Concluding remarks by S. Piggott F.B.A.

Like Mr King-Hele, I find it quite impossible to summarize even a part of our two-day meeting. He has touched on certain points of particular interest to him, and some of these were features which I found equally outstanding, so here I need mention only briefly our areas of coincidence or overlap. Engagingly, he introduced himself as a 'semi-mathematician and semi-astronomer without any specialized knowledge of antiquity': I can only say of myself that the British Academy could not have chosen among its prehistorians one less numerate than I.

But our hope in planning this meeting, as King-Hele has said, was that we might find common ground between disciplines too long thought to be wholly disparate; to see whether on closer and dispassionate inspection that yawning crevasse between the Two Cultures turned out to be only a crack in the snow. Dr Newton, lucid (as was Professor Kendall later) even to *me*, was of course deeply involved in history, and I shall come back to his reference to Archilochos; Dr Needham is as great an historian as he is a scientist, and with Babylonia, Egypt and the Maya we were involved in history, if only marginally so by reason of conditional literacy.

King-Hele also spoke of the unconscious tribute we paid to 'the nameless but ingenious proto-scientists of antiquity' and it was on these that the most controversial part of our programme centred. This afternoon we paid tribute not only to them, but also to the long, patient, accurate and modestly pursued work of Professor Alexander Thom, on which he has based a thesis which if accepted demands the recognition of considerable mathematical skills among the non-literate societies of northwestern Europe from the fourth to the second millennia B.C.; mute inglorious Newtons who somehow managed to command the labour and organization necessary to construct stone circles or alinements from the Bay of Biscay to the Arctic Ocean. Here, as subsequent discussion showed, however cogent his reasoning may be on purely mathematical grounds, many archaeologists, including myself, would feel that a great number of difficulties have not yet been faced in an evaluation of this hypothesis.

One such problem was touched on by both Professor Atkinson and Professor Lamb – not only the likely heavy incidence of cloudy skies in the north, but even more certainly, the heavy forest cover of all Europe in the temperate botanical climax of the Atlantic and Sub-Boreal phases. A glance for instance at McVean and Ratcliffe's maps in their *Plant communities of the Scottish Highlands* (1962) shows the density of natural woodland over the areas in which so many of the monuments under discussion lie, and the same goes for other regions of their occurrence: indeed Professor Thom's own slides forcibly demonstrated the difficulty of modern survey in the secondary woodland growths of parts of Brittany. And clear skies – how often were they to be

seen? Even in the Aegean Homer, in that fine sustained simile at the close of Book VIII of the *Iliad*, where the Achaeans see at night the lights of beleagured Troy shining like stars, adds as a proviso that it would be an exceptional sight, as when 'all the stars are seen, to make glad the heart of the shepherd'. All stars at night, astronomers' delight, and especially when seen from Callanish.

There are other problems too, integral to archaeology and history. Few of us would not like to think of the term 'megalithic' in European prehistory as having anything more than a literal meaning, 'of big stones', and in no way a cultural trait uniting different communities widely separated in space and time; chambered tombs, stone circles, cairns and standing stones need have no relationship to one another, and if we are not careful, we will find alinements as meaningless as the 'old straight tracks' of Alfred Watkins. The astronomy cannot be pursued *in vacuo*, but only with a full knowledge of the archaeology involved, as one hopes this meeting has demonstrated. There is always the danger of seeing ourselves in the past, of becoming victims of the fallacy whereby 'ideas are imported from present-day experience, and ancient man is anachronistically saddled with views he would have found at best strangely unfamiliar', as Ian Richmond put it, or of the unconscious tendency 'to project the axioms, habits of thought and norms of the present day into the past', in Henri Frankfort's phrase. God-like, we try to make ancient man in our own image, and the preferred image varies with the changes of taste and preference of our society. We desire to find admired qualities in the past, and mathematical and scientific qualities are admired today. If ecstasy and shamanism were more highly regarded than these, this is what we might be looking for – and doubtless finding – in prehistory. Observer-imposed categories are dangerous things. Professor Aaboe told us the entrancing story of Neugebauer finding an unsuspected calendrical significance in the teeth of his pocket comb: there is a well-known principle in logic known as Occam's razor, and may we not also need to apply the concept of Neugebauer's comb from time to time in our inquiries?

But perhaps revolutionary concepts are indeed upon us, and we must be prepared for all sorts of surprises. When Dr Newton quoted the Archicholos poem about a solar eclipse I remembered it started –

> There's nothing now
> We can't expect to happen

and, after enumerating several wild improbabilities, ended

> I wouldn't be surprised
> I wouldn't be surprised.

Nor would I.

And finally, and on behalf of the British Academy, I must echo King-Hele in thanking the Royal Society for all they have done to make this meeting possible, and to express the great debt we all owe to the work of Dr Roy Hodson in so effectively carrying the burden of so much complex organization.

PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY A MATHEMATICAL, PHYSICAL & ENGINEERING SCIENCES