

Paper Policy

WHEN is a policy not a policy but a pretence? On the face of things the ministerial meeting on European space research (see *Nature*, 240, 61; 1972) seems chiefly to have persuaded the representatives of European governments at present involved with ESRO and ELDO that the time has come to devise a new umbrella beneath which European space research can shelter. By all accounts, the British government is now one of the principal advocates of a European agency through which national expenditures on space research would in future be channelled. The principle is, of course, entirely laudable. The difficulty is that there is as yet no agreement among European nations on the kinds of work that should be attempted. The French government is now more isolated than ever in its belief that an independent European launching system is essential and, to tell from what Mr Michael Debré, the French Minister of Defence, has been saying in Paris in the past few days, it is unlikely to change its mind. But there are also profound differences of emphasis in the ambitions of other European governments, and Belgium has become conspicuous for its unwillingness to contribute to projects that do not yield a quick return. And, hanging over everything, there is the question of whether European governments, separately or collectively, should play some part in the post-Apollo programme of the United States.

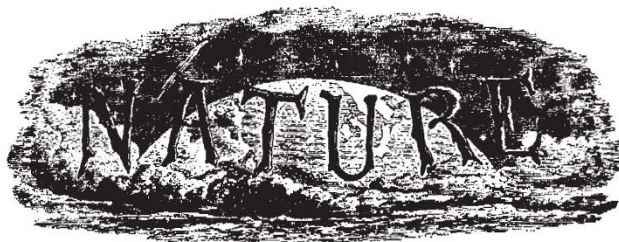
In the circumstances, it is easy to see why Mr Michael Heseltine, Minister for Aerospace, has been tempted to advocate a scheme which would have the effect of concealing the differences between European nations on what should be attempted. His concept of a European space agency is said to be one responsible for the administration of projects as different as the design of particular satellites for scientific research and the development of the Europa launching rockets on which the French are keen. Individual governments would be required to contribute only to those projects in which they had an interest. Although this device would have the advantage of making some continuing use of the facilities with which ESRO and ELDO have been provided in the past few years, and although there would no doubt be some economies of scale, there is nothing in what is now proposed to avoid the troubles that have plagued ESRO and ELDO, especially the tensions that arise when one member declines to contribute to a project on which others are keen.

This is why it would be better for the long-term health of space research in Europe if arrangements could be made for the space agency to operate, from the beginning, as a strictly common channel for funds and a means of executing work. The ideal is that the member nations should identify those areas of work they all consider to be desirable, and that they should then agree that the managers of the agency should be allowed to spend the funds available as they think fit, and without artificial restrictions such as the need to return contributions to the contributing states in the form of contracts let. It is true that such an arrangement would not be all-embracing, but there is no reason why governments wishing to sponsor extra work should not do so on their own, if necessary making separate arrangements with the space agency for services provided. The over-

riding difficulty, from which the governments seem now about to shrink, is that a space agency run on lines like this could be created only after there was a common view on what would constitute a common research policy.

But why not grasp that nettle? Most European governments agree that they must support the development of scientific satellites such as the ESRO-4 satellite due to be launched from the United States this month. There is also common agreement that the technology of communications satellites should be pursued, if on a modest scale. Taken together, these activities are enough to give a European space agency a useful job to do. At the beginning at least, there would be no need to make the agency's existence a reason for prohibiting bilateral agreements between member nations and the United States and the Soviet Union for particular extra projects, but in due course the agency could well become the agreed channel for all activities like these. On balance, there is a case for thinking that participation in the post-Apollo programme should be excluded from the agency's work, if only because European governments appear to be hopelessly divided about the desirability of such a scheme. At this stage, it is better to aim at arrangements which are wholeheartedly collaborative and not illusions of collaboration.

100 Years Ago



Misleading Cyclopædias

CAN any of your readers inform me if there is such a thing as a good and honestly constructed cyclopædia—one that does not send you hunting for information from one volume to another, and refer you backwards and forwards to articles that do not exist?

I have been repeatedly annoyed by this kind of will-o'-the-wisp, but have to-day met with such an outrageous example of it, that, although it involves some trouble, I feel it to be a duty to make a public exposure of it in your columns.

Requiring some facts on unusual atmospheric refraction, I turned to "Refraction" in the "English Encyclopædia." This article referred me to "Mirage, Fata Morgana," &c., for information on this branch of the subject. Turning to "Mirage," I found not a word, but another reference to "Reflection and Refraction, Atmospheric, Extraordinary." Next I tried "Fata Morgana," again the same reference. Coming back to letter R, I found the article "Reflection and Refraction," but was here referred to "Light, Optics, Refraction, Refrangibility;" then to letter A, "Atmosphere, Atmospheric"—nothing on the subject. Letter E, "Extraordinary Refraction"—nothing but a reference back again to "Mirage!" "Light, Optics, and Refrangibility" contain nothing on the subject.

I was thus sent on a search through five volumes of the work, and made to hunt out nine distinct headings for what does not exist; and what makes the matter worse is, that the writer of the article "Refraction," at the end of the work, must have known that it did not exist when he referred back to "Mirage, Fata Morgana," &c., which words have not a word of information appended to them.

An alphabetical cyclopædia is so much the most convenient for reference, and might be such an invaluable addition to a library, that it is the more to be regretted that it should be brought into disrepute by the absence of all efficient editorial supervision.

A. R. WALLACE

From *Nature*, 7, 68, November 28, 1872.