

Book Reviews

ROM HARRÉ, *Great scientific experiments*, Oxford, Phaidon Press, 1981, 8vo, pp. 224, illus., £8.95.

In little more than 200 pages Dr. Harré manages to describe the reasoning behind twenty experiments, the apparatus involved, and the results. They cover a wide range of sciences distributed between Aristotle's biology and quantum mechanics. The amount of information included is remarkable. For example, he has been able, in a few pages, to outline the essentials of wave theory and the four quantum numbers used to express the behaviour of electrons. All this as a preliminary to the description of the method used by Otto Stern to demonstrate diffraction among atoms in a beam of helium.

The experiments were selected by certain rather rigid criteria. Many of them are experiments that have been misinterpreted. Most were influential at the time they were done, rather than achieving fame later by hindsight. Third, the experiments chosen were elegant and often simple. Fourth, some series of experiments are described, such as Michael Faraday's demonstration of the similarity of all the various kinds of electricity. Harré is anxious to show that no experiment stands alone.

What is an experiment? The author discusses the question interestingly in the introduction to his book but comes to no very precise answer. He explains that experiments should have certain fixed parameters and then proceed to use independent variables to produce dependent ones. He notes it is not possible where human actions are concerned to separate variables and parameters. It is not surprising, therefore, that the only medical experiment among the twenty he describes is Pasteur's preparation of artificial vaccines. One should surely not conclude that medicine does not use experiment.

The book certainly contains materials for interesting discussion of the nature of experiment. It will be useful not only for school work but for anyone who wishes for a new insight into the history of science and the value of scientific method.

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TREVOR H. LEVERE, *Poetry realized in nature*, Cambridge University Press, 1981, pp. ix, 271, £22.50.

The extent of the Romantics' involvement with science – for long either dismissed as an embarrassment, or merely taken as read – is now being investigated in detail; certain surprises, and revisions of judgment, are the result. Dietrich von Engelhardt's analysis of Hegel's *Naturphilosophie* has shown that it is not the uninformed dialectical farrago it might appear; the recent work of P. R. Sloan and T. Lenoir has exhibited the subtlety and sophistication of, for example, Blumenbach's conception of *Bildungstrieb*. But while Goethe has not lacked sympathetic commentators for his scientific interests, there has been a surprising lacuna in the otherwise overburgeoned field of studies of his closest English analogue, Samuel Taylor Coleridge. This neglect is apparent even among the most influential Coleridge scholars. To mention two examples: in *Coleridge and the Pantheist tradition*, Thomas McFarland adopted a largely dismissive attitude towards Coleridge's scientific pretensions, which marred his searching analyses of Coleridge's indebtedness to Boehme, Spinoza, and Schelling; again, the scientific annotations represent in many ways the weakest feature of Kathleen Coburn's valuable edition of the *Notebooks*.

So Trevor Levere's lucid and engaging study of 'Samuel Taylor Coleridge and early nineteenth-century science' is both timely and requisite. It is written with admirable clarity; a virtue the more necessary in view of the densely-compacted prose style of the *Opus maximum* and related works, whose diction is far from the quiet and tender precision of *Frost at midnight*. If Levere's exegeses occasionally have the defect of making Coleridge's thought seem tautologous (which it may have been) or tediously banal (which it wasn't), he has untwisted with care the separate strands of what Coleridge himself admitted was "too often an *entortillage* in