

on Spencer become not inappropriate, 'The survival of the fittest does *not* mean . . . the survival of what is fittest to fulfil a good purpose—best adapted to a good end' but 'merely the fittest to survive'.

And what is objectionable about the second part of the book generally is not, as some of the teasing objections above could perhaps lead one to think, that, in conjunction with certain situational assumptions, it entails views found shocking by the vulgar: for some of the best worked out theories can be made to do the same (though not nearly so easily); and it is no harm to a philosophical theory that it should be at variance with vulgar prejudice. What is objectionable is that the high standards of arguing set in the first part were not maintained

in the second, where good arguing was more important, and that distinctions easily made were not made, and that some fairly obvious sources of objection (including some to which Professor Harrison will certainly have an adequate reply) were not considered, or obviated. It seems natural, certainly, to believe that moral judgments are true, or false, and that we do have knowledge of right and wrong. But is it necessary to understand such propositions in a quite literal sense, as descriptivists wish us to? Professor Harrison has not shown that it is.

There is an index, and the proofs have been carefully read, though read 'argument' at 51. Pp. 47-50 are loose in the review copy.

L. MOONAN

SCIENCE IN A RENAISSANCE SOCIETY. W. P. D. Wightman (Hutchinson Library), London. 1972. £2.50.

This short introduction to the search for scientific reasoning in that slippery age called 'the renaissance' (1450 to 1620 says the author) presents a number of problems to the lay reader. My chief complaints are centred rather in the scope of the problems treated than the specific investigation of each topic. The book plainly tackles too much territory, both in terms of what is 'scientific' and in terms of the period defined.

There are some very strong areas of this study: the history of medicine is quite well documented (especially in Italy and Germany) during the fifteenth and sixteenth centuries and there are some very good summaries of the work being done by specific men (Paracelsus) in university centres (Padua and Montpellier). However, looking at the treatment of the history of chemistry, one is disappointed to find no treatment of the search for the philosopher's stone (in Europe) or the Arabic elixirs (the Middle East); these preoccupations spurred chemistry to some of its most fruitful work. In astronomy, the Copernican revolution is covered with new insight into the theory involved, but little comment is made on the political significance of the impact of the theory. There is, however, a good discussion of the influx of Neo-Platonist thought via Campanella.

The celebrated Gutenberg Galaxy is also treated, but too diversely for us to grasp what the author wishes us to think about it. The one carefully worked out insight about topology and its relation to scientific schema (and its departure from the McLuhan thesis) is not

well enough substantiated to be clear (as, for example, in Foucault's *Les Mots et les Choses*). The author seems to favour a German-Italian axis of discovery, leaving Spain and France aside. There is, by way of Iberian material, a good discussion of the role of cartography in the explorations of the new world.

The excursions into the realm of the relationship of political and scientific thought are poor. The author ascribes Vittoria's theory of the *ius gentium* to Bartholomew de las Casas (p. 81), and further treats Machiavelli's *realpolitik* as a basically reactionary force (opposing it to the more inclusive *weltpolitik* of the exploring nations). Additionally, an interesting demonstration of the interaction of political ideology and nascent scientific discovery is called for but nowhere treated (there was a fine opportunity to do so when discussing the advancement of national interest through the new weaponry).

The closing chapters are very good indeed. It is here that the reader's attention is drawn away from a bewildering maze of names and references, and focused on the matter of the genesis of scientific discovery. The transition from the world of magic (the medieval one in general) to that of the scientific (the renaissance in part) is well presented. In the magical world, the emphasis was wonder, that Platonic spark that generated interest and the quest for knowledge; this was the prime mover towards the careful application of quantitative method to qualitative change. Nowhere is this better seen than in the transformer of

mathematics. For Ficino and Pico, it was a science only in the sense that it was an hermeneutic, the ancillary tool of the *magi*. Numerology as such owed much to the re-translation of the Hermetic texts and the revived interests in the Cabala during the sixteenth century. From this initial interest in the relation of numbers came the eventual interest in the relation of numerical quantity and the representation quality of mathematics (much in the same vein as the late scholastic debates on language produced the first genuine interest in vernacular grammar as representational schema). The move from magic (the control over matter) to scientific method (manipulation of matter) was easy when the change in *episteme* became apparent. Unfortunately, devising a world picture of the transition from the hermeneutical to the

descriptive methodology was not included in this study.

The discussion of Kepler as both a transitional figure (he was a magus and a scientist) is enlightening and entertaining, as is the work on Bacon. But both suffer from the chronic problem of the book: too superficial an account in the details, and too much detail in the mechanics of the theories, which are hard to understand without a detailed background. The style, too, makes it difficult to read. We do receive some good information about trends and movements, but too few carefully argued conclusions that would open us to a vista of the history of scientific development that would allow us to take its intellectual temperature during this critical period.

MICHAEL WEST OBORNE

TERTULLIAN: A HISTORICAL AND LITERARY STUDY, by Timothy David Barnes. *Clarendon Press: Oxford University Press*, pp. 285, £6.

Even if there had been no acknowledgements it would be patent from intrinsic evidence that the author of this study belongs to the school of Sir Ronald Syme. The English style is felicitously similar and the genre is that of Sir Ronald's 'Tacitus'. Yet at least there are enough facts known about the life of Tacitus to place him in his social milieu. Dr Barnes' approach to the traditional lives of Tertullian is perhaps rightly destructive. He discards the twenty lines on Tertullian composed by Jerome, the suggested identification with Tertullian the Jurist and even the hypothesis that the Bishop attacked in the 'De Pudicitia' was Callistus of Rome.

It is an old Oxford adage that a negative result is the best evidence of positive scholarship. This is an admirable doctorate thesis. Its

most valuable section analyses the evidence for Tertullian's wide reading. It places him rather too squarely in his Carthaginian milieu; it is hard to believe that he wrote his Greek treatises for a Carthaginian audience. But it provides new material on the development of Christianity in North Africa and illuminating parallels with Apuleius. There is much more to be said on Tertullian as a theologian, but as the subtitle suggests the emphasis is on his secular setting.

This study has so many merits, lucid style, a healthy cynicism and much detailed research. But there is one fact that it does not convey about Tertullian—the central truth that he was a genius if possibly a slightly mad one.

GERVASE MATHEW, O.P.

ONE MAN AGAINST THE DRYLANDS, by Peggie Benton, *Collins*, £2.50.

This book is about Brazil—a nation caught up in the socio-political evolution that is stirring the whole of Latin America today. But *One man against the Drylands* does not treat this theme on the broad canvas of national movements of initiative and protest. Rather, it belongs to that literary genre of biography that concerns itself with individuals who have unobtrusively identified themselves with a particular group within the larger community.

It is understandable that those preoccupied with the greater issues are simply not aware of

the more limited human plight. Where a choice of priorities must be made one tends to be committed to what is thought to be central and to shelve the supposedly marginal. Often it is more clamorous that tends to be heeded and muted voice is largely ignored. Consequently, the 'hero' of this kind of book is something of a prophet, doggedly articulating a human need in the fact of ignorance and massive indifference. He is a solitary figure caught in the circle of having to achieve something before he can