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process will induce subsequent sterility, which causes high-parity women of any given age to be more likely to have become sterile than lower-parity women of the same age). It is perhaps surprising also that the discussion of methods of detecting the presence of deliberate control of fertility in marriage from the statistical patterns of child-bearing contains no reference to the methods devised in recent years by Coale, an elegant and economical technique which has been shown to be of value in studying small populations, even though better suited to the analysis of big populations.

Finally, the unwary reader may wish to note that the great emphasis placed by Flinn upon mortality crises in curbing population growth in pre-industrial times, and upon the decline in mortality crises in promoting the growth of population in the eighteenth century, does not command universal assent. The debate on this and closely related topics has been pursued since Malthus's day, often with marked vigour, and while there are many who would accept Flinn's view and much evidence to support it, equally cogent arguments and evidence can be produced for other views.

It would, however, be unfortunate and inaccurate to convey the impression that this book is marred by major faults. It is a most valuable addition to the growing number of authoritative studies of European historical demography which have transformed our understanding of the balance between production and reproduction in the past. Great care appears to have been taken over the printing and proofing of the tables, a most welcome virtue, and students of population history have good cause to be grateful to Professor Flinn for his industry, accuracy, breadth of knowledge, and willingness to seek the unifying concept which may serve to "save the phenomena", even when the phenomena are drawn from half a continent over almost half a millennium.

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CHARLES COULSTON GILLISPIE, Science and polity in France at the end of the Old Regime, Princeton University Press, 1981, pp. xxii, 601, £22.30.

C. C. Gillispie presents his latest book in these terms: "It is a civil history of work-a-day French science late in the Enlightenment and is meant to be complete" (p. ix). Such a programme would make lesser historians wilt merely in anticipation, but Gillispie evidently relishes his task, which he approaches with admirable thoroughness. Sections are devoted to medicine, botany, map-making, various branches of manufacturing, engineering, agronomy, and much else besides. Remarkably, the author seems at home on all he examines, discussing with great sureness of touch subjects as diverse as, for example, methods of extracting saltpetre, labour-relations in the Montgolfier family's paper-manufacturing business, road-building techniques, the topography of the meeting-place of the Academy of Science, and the symptoms of rabies.

The core of Gillispie's argument is that the ministry of Turgot (1774/5) inaugurated a period of particularly close liaison between government and science. Down to the Revolution, as the government drew increasingly frequently on the discoveries and expertise of scientists it also further legitimized the corporate status and privileges of the different bodies in which scientists were organized. This, together with the tendency for scientific organizations to accord greater importance to providing theoretical training for their members, marked a growth of "professionalization" in all walks of scientific life.

Individual doctors and surgeons crop up here and there throughout the book, but most of the material relating to medicine comes in two lengthy chapters. In 'Science and Medicine' (pp. 187–256), Gillispie depicts the development of the characteristic institutions of the medical establishment – the Faculty and the Academy of Medicine, the Academy of Surgery, the Apothecaries' Company and the College of Pharmacy, whose little-exploited archives he utilizes to good effect. He also describes some of the campaigns in this period in which medical men were prominent (hospital and prison reform, sanitation, public health). In the chapter

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'Scientists and Charlatans' (pp. 257-331), Gillispie goes on to show doctors endeavouring to define more clearly the contours of their profession by attacking what they saw as medical quacks. Entertaining full-dress treatments of the medical careers of Mesmer and Marat illuminate the general theme.

Gillispie's general thesis is not, it is true, novel in regard to medical science. However, the book's breadth of scope allows medical developments to be placed against the wider panorama of Enlightenment science. The biographical and institutional approach may at times lack theoretical edge; but it makes for diverting as well as instructive reading. At the end, one emerges with a clearer sense of the world of emulation and research, government sponsorship and private patronage, professional overlaps and personal quirks and eccentricities which Enlightenment scientists inhabited.

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JOHN BLOCK FRIEDMAN, The monstrous races in medieval art and thought, Cambridge, Mass., and London, Harvard University Press, 1981, 8vo, pp. xiii, 268, illus., £14.00.

This fascinating account of the monstrous and fabulous races that peopled the fringes of the medieval world offers many revealing sidelights on medicine. We meet the children of Adam who ate forbidden herbs and begat monsters; theologians and lawyers, as well as the physician Pietro d'Abano, discussing the religious and possibly human status of monstrous births; and, somewhat belatedly, believers in a pre-Rousseau noble savage wandering in the woods. The common Hippocratic theory of environmental and humoral determinism easily led to the unfortunate conclusion that the Negro was irrevocably inferior, no matter how sophisticated his social organization. Galen's opinion of the Negro, as reported in Arabic sources, confirmed this necessary degradation: the Negro's excessive emotionalism was the result of a natural imperfect organization of his brain, which led to a weakness of intellect, as inevitable as his curly hair, thin eyebrows, dilated nostrils, thick lips, sharp teeth, smelly flesh, black colour, long feet and hands, and large genitals. (al-Mas'ūdī, Les prairies d'or, tr. B. de Meynard, Paris, 1861, 1, 162; cf. Ibn Khaldūn, Muqadimmah, tr. F. Rosenthal, Princeton, 1958, I, 175.)

These arguments were transferred to another context by Sepulveda in his famous argument in 1550 on the best way to propagate Christianity in the New World. Nor has a voyeuristic delight in curious customs of marginal tribes entirely disappeared from some departments of anthropology. Unlike the phallic pictures on the walls of Råby church in Denmark, figs. 59–62, ideas need more than whitewash to be destroyed.

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DANIELLE JACQUART, Le milieu médical en France du XII<sup>e</sup> au XV<sup>e</sup> siècle, Geneva, Librairie Droz, 1981, 8vo, pp. 487, [no price stated], (paperback).

Dr. Jacquart completes her revision of Wickersheimer's Dictionnaire biographique des médecins en France au moyen âge with a second Supplément and a social study of the named doctors, surgeons, barbers, mires and lesser practitioners, both within a single volume. The two parts fit unhappily together, especially as the supplementary data could not be taken into the analytical account.

Aided by the computer and many graphs, maps, and tables, Dr. Jacquart sketches the development of the medical profession in France. Although she is duly hesitant about generalizations whose bias may reflect the absence of historical records rather than the true historical situation, she makes a good case for seeing two crucial periods in the development of the medical profession in medieval France. The first, at the end of the thirteenth century, marks the beginning of the organization of the various groups within medicine; the second, the last half of the fifteenth century, indicates the gradual replacement of the clerical by the lay physician. She also has good things to say about the influence of Montpellier and Paris Universities, and on the effects of the removal of the Papal court to Avignon in the fourteenth century. But France still seems far more sparsely provided with healers than contemporary Italy or even,