In America, there were a number of praiseworthy attempts to improve the position of the midwife in the early nineteenth century, and an increase in the number of European midwives accompanied the influx of immigrants after the 1880s. Yet the midwives' position was so insecure that they nearly died out as more and more women opted for physician deliveries in hospital. Only recently, since the 1970s, has there been something of a midwife revival, split between the nurse-midwives and the "independent" midwives. The difficulties of the American midwife can be attributed largely to the absence of those very factors which strengthened her colleague in Britain. In America, there was no strong eighteenth-century tradition; no strong link with the nursing profession, although the public health nurses held out a hand in the inter-war years; there was no support from the early feminists of this century, and there was no uniform or Federal certification. Instead, there were wide disparities in the often half-hearted attempts to improve and certify midwives in different states, varying from the moderately successful at one extreme, and at the other the introduction of legislation in Massachusetts (in 1907) and Florida (in 1982) intended, directly or indirectly, to outlaw the midwife altogether. Most of all, however, the tradition of general practitioner obstetrics and deliveries conducted in the home, sank very much sooner in the USA than in Britain, almost taking the independent midwife with it. By the second world war, when only thirty-seven per cent of all deliveries in Britain took place in hospital, some eighty per cent of *urban* deliveries were hospital deliveries in the USA. Home deliveries were almost exclusively confined to the urban poor, especially the black population. Moreover, throughout this century there was the almost total and relentless opposition to the midwife by the American medical profession. With few exceptions, they were set on abolishing all midwife deliveries, even when statistics showed that home was safer than hospital.

This is the bare bones of a complex story which is dealt with in Litoff's introduction. The rest of the book is a valuable collection of papers and reports that influenced or reflected the midwife debate. There is a 1915 paper by De Lee—the Chicago obstetrician, famous for his "prophylactic forceps operation" (1920)—in which he says things about midwives that could make your hair curl. There is a paper (1927) by the marvellous Mary Breckenridge, who set up the Frontier Nursing Service in Kentucky, a service of *nurse*-midwives which achieved near-miracles of obstetric efficiency under the most adverse conditions. This was modelled on the midwife service of the British Highlands and Islands Crown Commission, and highly praised on both sides of the Atlantic. Too little attention has been paid to this remarkable woman whose brilliant autobiography, *Wide neighborhoods* (1952) has now been re-issued in paperback in the USA (Lexington, University Press of Kentucky; reviewed in *Med. Hist.*, 1982, **26:** 358–359).These are only two out of eighteen important and fascinating source contributions.

To understand the essence of the midwife debate in the USA from 1800 to 1980 is far from easy; but to do so is to appreciate the breadth of the factors which have shaped obstetric care in the Western world. Those who confine their attention to Britain, or for that matter any other European country, know only half the story; that is why a publication such as this is important for us as well as for American historians of midwifery and obstetric care.

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KENNETH J. CARPENTER, *The history of scurvy and vitamin C*, Cambridge University Press, 1986, 8vo, pp. viii, 288, illus., £27.50.

As I tapped a final key and watched seven (albeit intermittent) years' work on citrus and scurvy emerge from the printer, another Englishman in faraway California was dispatching to Cambridge the corrected proofs of a very much larger work on the same subject. Such are the hazards of scholarship. However, my personal disappointment at being forestalled turned to a very genuine delight when he rushed me an advance copy. I had focused on the early years, from Cabral to Cook. Professor Carpenter has done an immense service to naval, medical, nutritional, and many other historians by reviewing the entire story, from the Age of Discovery right through to Linus Pauling and his recommendations of vitamin C for the common cold, cancer, and even schizophrenia.

It has been estimated that between 1500 and 1700 some two million sailors died of scurvy, making it the foremost occupational disease in history. The birth of modern western societies, largely through maritime expansion, was indeed a painful one. The curious fact is that the cure and prevention of scurvy was documented from almost the beginning of that era, being hinted at by da Gama and spelled out even more clearly on Cabral's voyage to India. By the start of the seventeenth century, Lancaster was dosing his sailors with spoonfuls of lemon juice, and for a while this was continued on East India Company ships. On the face of it, the problem seemed to have been solved, yet the literature shows that again and again the lesson was lost, buried by every kind of obfuscation that medicine, prejudice, and perhaps parsimony could produce.

The major hindrance was undoubtedly theory. Scurvy, like any other ailment, was caused either by a "something", a positive cause, or by lack of a "something", a deficiency. Considerable emphasis went on positive agents, chiefly food (salty diet, hard biscuits) and the environment (sea air, foul air, dampness, cold), but deficiencies (especially fresh vegetables and fruits, but also fresh water) were also espoused. In large measure, the history of scurvy is the swing back and forth between positive and negative "causes", each determining the supposed cure within whatever medical or philosophical theory was available to explain the functions of the body. Humoral theory, notions of acid/hot versus alkaline/cold, insensible perspiration, fermentation versus putrefaction, pneumatic chemistry, potassium theory, contagion, ptomaine theory—each of these at one time or another guided the physicians who filled the medicine chest or advised on nutrition and living conditions.

There is a received notion that Lind hit on the solution by inspired clinical trials, while Cook first proved the efficacy of citrus fruits on long sea voyages. In fact, Lind did not see scurvy as a deficiency disease, but chiefly as the result of moist air *(Scorbutus locis aridis ignotus est)*, while it was Cook's determined harvesting of wild vegetables that kept scurvy (almost) at bay. The pragmatic solution of the sixteenth and early seventeenth centuries, even with Lind's own clear demonstration of the value of citrus, simply could not withstand advancing medical theory. What Professor Carpenter shows with great skill is how theory continued to dog practice, so that by 1900 the understanding of the disease was actually more confused than it had been in 1800, which probably contributed to the deaths on Scott's return from the South Pole in 1912 and gave rise to the extraordinary manifestation of scurvy in middle-class children in the late-Victorian period. Only with the almost chance use of guinea-pigs as experimental animals was scurvy finally proved to be a deficiency disease, and with the isolation of vitamin C and its large-scale synthesis in the 1930s, the cycle was ready to start again: inadequate medical theory, a lethal disease, an enthusiastic protagonist for the new "cure"—this time, cancer.

Professor Carpenter has assembled an enormous amount of data (715 references), but has managed to present the story in such a readable way that non-medical historians will have no difficulty (and should emerge with a useful smattering of organic chemistry from someone who must be an excellent teacher). With a story of near five centuries, there are naturally omissions, and it remains for others to document more fully the early experiences of the Dutch, Spanish, Portuguese, and indeed those of the Arab traders, the Polynesian migrants, and the huge fleets of Cheng Ho during his seven voyages in the fifteenth century. However, this book will for many years to come, provide the essential framework for those who, as if painting by numbers, delight in filling in small areas of a very large canvas.

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ROGER FRENCH and FRANK GREENAWAY (editors), *Science in the early Roman Empire: Pliny the Elder, his sources and influence*, London, Croom Helm, 1986, 8vo, pp. [viii], 287, £19·95.

This book contains a welcome series of papers on Pliny's *Natural history*, delivered at a recent symposium held at the Royal Institution in London. The symposium was an ambitious one, aiming both to encourage the study of Roman science in general, and to examine some specific areas of scientific interest in the *Natural history*. The first paper, by Reynolds, locates Pliny in his historical and social context, while the last two (by Eastwood and French) examine the impact of