

sources, whereas most of the indications of the social and political consequences of that change come from the north. This leaves open the possibility of considerable regional diversity and of a yet more complex picture of the phenomenon that Carmichael has investigated.

Whatever further research may reveal, this book brings new technical sophistication and an abundance of illuminating hypotheses to an immensely important and yet relatively neglected dimension of Italian Renaissance society. Carmichael shows how much more there is to be learned from sources that historians have long been aware of but unable to use as fruitfully as they might have without the expertise in epidemiology and medical history that she brings to them. And she further shows that the history of medicine is inseparable from a whole series of social and political contexts. But no doubt this is already clear to a world trying to deal with its own plague of AIDS.

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Kenneth J. Carpenter — *The History of Scurvy and Vitamin C*. Cambridge: Cambridge University Press, 1986. Pp. viii, 288.

Three pages before the conclusion of *The History of Scurvy and Vitamin C*, nutritionist and historian Kenneth J. Carpenter offers the following generalization:

...the contributions of men already eminent for another piece of work have, when it comes to scurvy, been rather uniformly negative...In most instances the theory advanced was related in some way to the work for which the man had become famous. In contrast, the people... who made contributions and drew conclusions that we now consider well-founded, seem equally consistently to have escaped the usual marks of general recognition and appreciation.

Carpenter illustrates his generalization with a table. For example, he lists Jean-Antoine Villemin (1827-92) as a member of the Paris Academy of Medicine best known for his experimental proof that tuberculosis is an infectious disease and who hypothesized that scurvy was caused by a "contagious miasm." He identifies Joseph Lister (1827-1912) as President of the Royal Society and Surgeon to Queen Victoria famous for his introduction of antiseptic procedures into surgery; Lister's theory of scurvy considered the disease a result of bacteriologically generated "ptomaine intoxication." Other men muddled the understanding of scurvy in different ways. But all the famous theoreticians erred by letting intellectual presumption triumph over the wisdom of necessity-driven empiricism, which Carpenter labels "instinct and experience."

This tension between beguiling but misleading theory and ever more subtle but recalcitrant fact is the general theme of Carpenter's survey history. The story begins with the first reports of scurvy on the daring voyages of discovery of the fifteenth, sixteenth and seventeenth centuries, sails through the experience of the British navy in the eighteenth century, shifts to nineteenth century outbreaks of scurvy among prison populations, adventurers on the California Gold Rush, soldiers in the Crimean and American Civil wars, and citizens of Paris under siege during the Franco-Prussian War, and finally concludes with accounts of scurvy among Arctic explorers and infants fed on commercial formula food at the turn of the twentieth century. Throughout, Carpenter's account is vivid and intriguing as he quotes extensively from ships' journals, contemporary reports, and early published essays. He maintains an air of suspense, sprinkling clues that only fall together in the final chapter in which the various mysteries of scurvy's cause, cure and prevention are solved in the light of modern nutritional and biochemical knowledge. But Carpenter also notes how recurrent attempts at theoretical understanding blurred the simpler and often more correct observations of seafarers, military personnel and other paractical men. In the sixteenth century neoclassical humoral theory contributed to the confusion, in the seventeenth and early eighteenth iatromechanical ideas were to blame, in the later eighteenth

pneumatic chemistry was a culprit, and in the nineteenth century first 'animal chemistry' and then bacteriology added to the chaos. Two general rules seem to be that whenever a new medical theory came into vogue, its principal tenets were applied to scurvy and that whenever theory was particularly prominent basic facts became fuzzy and distorted — chastening but not unpredictable lessons from medical history.

There is much to admire in *The History of Scurvy and Vitamin C*, for Carpenter has told his story well. Particularly noteworthy are his accounts of James Lind's classic experiments with eighteenth century British seamen [“probably the first controlled trial in clinical nutrition” (p.52)] followed by Lind's disappointing experience, the puzzles associated with the occurrence of scurvy in Arctic exploration, and the exploitation of the guinea pig [unquestionably patterned on the use of (animal models) in bacteriological investigation] which in the early twentieth century provided a rigorous experimental method for the systematic study of scurvy as a nutritional deficiency disease and for the isolation of Vitamin C. There is even passing allusion to the commercial exploitation beginning in the 1930s and to the sometimes dangerous fads and fantasies of the sixties and seventies. Any one of these topics could have been developed in a fuller and more subtle intellectual, institutional and socioeconomic context, but it is a credit to Carpenter that they are mentioned at all, often with appetite — whetting suggestiveness and up-to-date scholarly references. Carpenter's history is, after all, a survey, and like most surveys it at times sacrifices depth for breadth and the overarching sense of authority. But successful surveys, like this one, educate their readers while alerting them to vast areas yet to be explored.

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Margaret DeLacy — *Prison Reform in Lancashire, 1700-1850: A Study in Local Administration*. Stanford: Stanford University Press, 1986.

In this exceptionally well-written account of the development of Lancashire's county gaols between 1700 and 1850, Dr. DeLacy affirms that recent historical work on penal institutions in this period is in need of revision. DeLacy maintains that county gaols in isolated and rural county Lancashire were not notoriously cruel or unhealthy. Humane and well-intentioned justices embarked on building programs and up to 1780 provided prisoners with assistance which was “adequate if not generous”. This assessment, which downplays the horrors of the 18th century gaol, undercuts the thesis, developed most fully by Michael Ignatieff in *A Just Measure of Pain* (1978), that there was a significant break from the past in the late 18th century in the history of the prison. Ignatieff's radical critique suggests that middle class reformers, revolted by the physical conditions in English gaols, promoted the erection of penitentiaries whose regimes were more uniform, repressive and efficient than the ones they swept away.

Although conscious of the continuity of the reforming tradition behind Lancashire's county gaols, DeLacy freely admits county gaols faced an unprecedented demographic crisis in the 1780s which eventually resulted in the emergence of a new penal regime. There was an urgent need for additional accommodation at a time when imprisonment became an increasingly popular secondary punishment for all types of offenses. The author reminds us that numbers dictate the quality of prison life, as witnessed in the 1780s when prisoners in Lancashire faced starvation and typhus epidemics as a result of overcrowding. This crisis was met by the expansion and renovation of prisons, and the slow introduction of rules aimed at combating poor physical conditions and lax discipline. Again, DeLacy opposes the views of recent radical interpretations that place an emerging bourgeoisie, guided by the model of the factory, at the centre of this reform movement. In Lancashire, penal administration